

COAL AGE

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Getting Your Feet Braced

FOR months the cartoonists have been picturing Mr. Consumer in headlong flight down the cliff of declining prices after a comfortable climb to the peak of high prices. The country is now experiencing that drop and while the thrills are not up to anticipations the end is not yet. As each commodity feels the effects of lowering prices there begins at once a halting, hesitating market. Prices are going down; ultimate consumers are off the market, waiting to see whether the bottom has been reached, and each link in the chain of distribution is affected by the slowness of the consumer.

All signs plainly point to a declining soft-coal market—not because of the activities of the Attorney General but because production is catching up with demand. But, whatever the cause, when prices begin to slip the consumer is going to hold off as long as he can, watching and waiting for the bottom. The problem for the producer and distributor of bituminous coal will then be to decide what for him is the base price, below which he cannot afford to go.

It is a little late now to trim sail if the selling policy has been wrong this year, but if customers have been treated fairly, contracts measurably well filled and prices reasonable he can face a failing market without sleepless nights.

Save the Export Business

DANGERS beset the export trade in American coal; dangers that are both inherent in the business and that have been born of the suddenness of its growth. It must be, as it has largely already been, accepted by the men in the industry that the right to export coal is subordinate to the inherent rights of our nationals to a proper measure of protection. To recognize this is but to acknowledge the basic and fundamental nature of the industry.

The danger then that confronts the growth and development of the export trade in coal is that growing out of its effect on domestic prices. A test of strength in this question has already been had and the laurels rest with coal. The right to export was accepted by the Government this year after the concession of prior right of New England to our coal had been accepted by the shippers. We see the same question rising in the future, when conditions have become more normal. It seems inherent in the business that an active foreign demand at our Atlantic ports must raise the level of prices for the domestic buyer. The only possible way to avoid such a dangerous contingency is to so increase the supply available that only the extreme of demand shall have this unpopular effect. This result can only be effected by first vastly augmenting the means by which coal is carried from mines to boats—the railroads and dumping piers.

No avenue has been found so far by which, under existing laws, sellers of coal can agree on a limitation of price for their product when it is for home consumption and can combine selling efforts in the foreign markets. It is on this point—the opposing ideas fundamental in the Sherman and Webb laws—that all projects for a combination to further the export trade so far contemplated have failed, and it is only by some such method that the danger of elevating local prices through foreign demand can be eliminated.

Of course, if it were possible to separate into one class those who sold only to local and coastwise markets, and into another class those trading abroad, the price levels might be separately maintained. Such a scheme, however, would destroy the usefulness to the industry of the foreign business, and is of course impossible as our industry is now constituted.

In commenting on the future of the export business of the United States James A. Farrell, president of the United States Steel Corporation, has urged the necessity for developing foreign markets if the present productive capacity of this country is to be maintained.

Speaking before the seventh annual meeting of the National Foreign Trade Council he said: "In every business there is a part of the production, roughly estimated at the last 20 per cent, which cannot remain unsold if the first 80 per cent of the sales are to prove profitable. Remove this last 20 per cent and the whole operation will cease to show a profit. So it is with the present productive capacity of the United States; a certain volume of foreign sales must be maintained or the industry of the country will suffer throughout."

More potent and more immediately present is the danger to the export trade resulting from the greed and avarice of our unscrupulous exporter. To a large element of unprincipled money-grabbing speculators, who early this year dived into the game, the name of the American coal industry owes the opprobrium it has received abroad. The honest dealing of the right-thinking forward-looking exporter has been overshadowed by the dishonest dealings of the crooked speculator, with the result that today we are in bad repute abroad. We have the name of not living up to our bargains, and in trade and particular in international trade, there is no more serious charge.

The cream is off the export market today. It is time the real coal men of the United States took steps to remove this stain on our national name and began to build a real export business. Our guess is that we have three years as a minimum and five years as a maximum in which to learn how and in which to establish our coals abroad as they should be established. We suggest the formation of a national association not to sell coal but to so guard the traditions of honest business that membership would be a guarantee of integrity and an international badge of respectability.

Operators Should Not Overlook Their Own Union

SPEAKING before a group of business men in Washington recently A. J. Hobson, president of the Association of British Chambers of Commerce, said that it is the view of British governmental officials in England that every man ought to be in a union and every employer in an association.

"The man in Great Britain who is not in an association or a union is a nuisance to his Government," he said. "The Government likes to see us arranged in regular regiments because it is so much more convenient for a Government department to deal with us as one party than with each employer as an individual. The result is we are ceasing to be a free country, because the man who is not in the union is regarded even by the Government of his country as a man who is making an unreasonable use of his liberty in not joining the army he is supposed to be in and not being at the battle he is supposed to be at. I think it is most deplorable that there is this insistence that every man must join the union."

Every coal operator who signs a contract with the United Mine Workers agrees with the British Government official, for he makes covenant with the union to force the mine laborer to belong by withholding from his pay the union dues of the man. In general the operators who are in the older union fields favor the system, with all its faults. At the same time all too large a portion of these operators do not recognize the value of *their* union—the operators' association.

Perhaps it is unfortunate for the strength of the operators' association and the unity of policy that they have no check-off.

Buying a Sure Supply of Coal

SINCE 1916 there has been a well-defined movement on the part of some classes of coal consumers to obtain protection in their coal requirements by buying and operating bituminous-coal mines. The assumption of these consumers has evidently been that lack of coal in the past and higher prices have been due to shortage of coal. The obvious error in this judgment is a striking example of some of the incorrect thinking so common on the subject of coal. Those who guessed that the purchase of a coal mine was all that was necessary to insure a low priced supply have learned more about the real story of coal in the last year than have those who have not been in position to experiment.

Transportation—not coal mines—has been short, and buying a source of supply at a distance has netted the consumer little but trouble. The utility, for instance, that acquired a mine entered a new and, to it, foreign field of endeavor without compensating advantage.

Prior to the war large consumers were also producers of coal. The steel industry is a general example, and the United States Steel Corporation a notable instance. With some of the best-equipped mines in the world the United States Coal & Coke Corporation, a subsidiary, was furnishing West Virginia coal for the byproduct ovens in the Chicago district, and from mines in Illinois was shipping lower grade coal to the same plants. The H. C. Frick Coke Co., also a subsidiary, mined and coked coal for the major requirements of the Steel Corporation in the Pittsburgh district. The Tennessee Coal, Iron & Railroad Co. in Alabama, affiliated with the

Steel Corporation, also produces the coal it consumes. Other steel producers—the Woodward Iron Co., Republic Iron & Steel Co., Colorado Fuel & Iron Co.—have long been independent of the coal market.

Public utilities have not been backward in this respect. The Milwaukee Coke & Gas Co., Indiana Coke & Gas Co., the Solvay Company, New England Fuel & Transportation Co. and many others now own or control coal mines. The International Harvester Co. and Henry Ford are typical examples of industries producing the fuel they consume. The Bertha Coal Co. is a type of co-operative effort in coal production, the financial backing for this latest venture of Mr. Jones being coal consumers who have adopted this method of acquiring a supply of coal.

This year, as during the war, soft coal has been difficult to obtain because of lack of transportation. The consumer who owned a mine but did not own the transportation for the product of that mine to his plant, or who was not given a priority in transportation, has been no better off than he who did not own a mine. He was not even benefited in cost of coal. For example, a consumer who owns a mine but depends upon the normal regular car supply offered coal mines by the railroads has obtained an output of from 20 to 60 per cent of his expectations, because that has been the amount of car supply furnished by the railroads in various fields. He may have bought a mine capable of producing 5,000 tons a week, because that is his plant requirement. The Government has issued various priority orders and given the right of assigned cars to individuals and railroads to such an extent that the coal from his mine has been actually taken away from him and forcibly diverted to the railroads for fuel, to public utilities, to New England or to the Lake trade for the Northwest, or perchance ordered to retail dealers in Ohio or Michigan. The net result is that in many instances such a producer-consumer has received only 10 per cent of the coal produced from his mine. He may have been getting that at a price satisfactory to him, but for the other 90 per cent of his requirements he has had to bid in the open market when prices have been very high. It is one of the peculiar circumstances of the coal situation this year that this is true.

What is the answer for the consumer who would have an absolute surety of supply? Own the transportation, or at least the cars. It is one of the axioms of Governmental policy in handling coal that privately-owned coal cars are inviolate. The coal operator owning coal cars can furnish a guarantee of service because to the extent of his own cars he is sure of operating his mines and delivering his product. The only method of Governmental control possible today is through the Interstate Commerce Commission, which operates through car service orders, effective on cars owned by the railroads. The Interstate Commerce Commission to all intents and purposes took from the public supply of cars a portion, at times large, and put that portion in the class of privately-owned cars when it authorized the use of assigned cars for public utilities.

Don't depend on owning a mine to get your coal when coal is scarce and you need it—rather store enough in time of plenty to tide you over periods of shortage, or own your coal cars. Henry Ford has gone a step further and bought a railroad.

Like others of his experiments, this latest venture will be watched with interest. Others less opulent should consider the importance to them of more transportation.

New York Utilities Pool Coal

M. S. Sloan, president of the Brooklyn Edison Co., has issued a statement for the New York Fuel Distribution Committee, saying the public utilities of New York City were standing together and would pool their coal supplies, if necessary, to prevent any utility from being closed for lack of coal. He said the New York & Richmond Gas Co. had been in straits for lack of fuel during the last week and had been supplied by the Brooklyn Edison Co.

British Coal Strike Makes 100,000 Others Idle

Although complete figures for the whole country are not yet available, it is estimated that to date at least 100,000 people in other industries in Great Britain have been discharged as a direct result of the miners' strike.

Railroad Lays Off 1,000 Men

The Philadelphia and Reading Ry. reduced its working force approximately one thousand men and, effective Oct. 18, placed all employees of the system on an eight-hour basis.

Reports Increase in Loading of Freight Cars

According to figures made public by the Bureau of Railway Economics the average number of tons of freight loaded per car during August was 29.6, the greatest for any month since December, 1918, when the average was 29.8 tons. For July, 1919, the average was 27.8 and for June, 1920, it was 29. During August the average daily movement of freight cars was more than 27 miles, compared with 26.1 miles during July, 25 miles in June, and 24.2 in May. In April, the month of the yardmen and switchmen's strike, the movement averaged 19.4 miles per car per day.

Buying Lull Cuts Off 100,000 Factory Employees

As a result of retrenchment by the public in the purchase of apparel and other goods, according to the monthly report of the State Industrial Commission of New York, another decline of 2 per cent in the number of factory employees was recorded for September. The gradual reduction in operating forces in the factories has been going on since March and the report stated that since that time fully 100,000 workers have been dropped from employment rolls.

Coal Strike Endangers Mexican Industries

A strike of 12,000 coal miners in the state of Coahuila, Mexico, has assumed such grave aspects that Provisional President de la Huerta

is making determined efforts to effect a speedy compromise of the difficulty. Unless an agreement is reached soon it is reported many smelters and other industries will close down because of lack of fuel. This would throw more than 100,000 men out of work. Despite the strike, the pumps in the mines are being operated to prevent the pits being flooded. The strikers demand a large wage increase and better working conditions.

Pittsburgh Judge Declares Lever Act Illegal

Judge W. H. S. Thompson, in the U. S. District Court at Pittsburgh, read an opinion from the bench Oct. 21 declaring the fourth section of the Lever Act unconstitutional and dismissing the Government's petition for an order of removal so

market at a price in excess of the contract price, should be deducted in making settlement with the contractor.

President Appoints Five to New Shipping Board

President Wilson on Oct. 21 appointed five of the seven members of the new Shipping Board created by the Merchant Marine Act. Admiral William S. Benson, chief of naval operations during the war, was re-appointed chairman. The other four members named were: Frederick I. Thompson, a newspaper publisher of Mobile, Ala.; Gavin McNab, an attorney of San Francisco; Martin J. Gillen, an attorney of Wisconsin, and Theodore Marburg, a publicist of Baltimore.

Commercial Failures Increase

An increase in failures during September is reported by Bradstreets, the move along this line having been in evidence since July of last year, when failures touched their low point. The September failures show a heavy increase in liabilities as compared with August, being two and one-half times greater, and twice those of June.

Would Make Dealers Responsible For Equitable Distribution

O. P. B. Jacobson, of the Minnesota Railroad and Warehouse Commission, advocates the passing of state laws making coal dealers accountable for equitable distribution of coal to all communities. He regards it as impossible to make any orders that will secure all the coal that is needed for the Northwest before lake navigation closes. Montana coal, which costs \$7.10 freight and 21c. war tax, is being shipped to the Twin Cities for the first time in a number of years.

Steel Production Exceeds Pre-war Figures

Production of steel ingots and castings during 1919, according to the Statistical Bulletin of the American Iron and Steel Institute, amounted to 34,671,232 gross tons, compared with 43,051,022 gross tons in 1918 and 31,284,212 in 1915. Finished rolled iron and steel production in 1919 totaled 25,101,544 gross tons compared with 31,155,754 in 1918 and 24,392,924 in 1915. While the decrease as compared with 1918 is marked, the output in both classes was in excess of that of any year preceding 1916.

New York Central Curtails Shop Force

A reduction of 10 per cent in the force of the main shops of the New York Central R.R. at Elkhart, Ind., was made effective recently.

NEWS BRIEFS

Terse Items Chronicling Events of Interest to the Industry

that George W. Yount, George A. Howe and William O. Taylor, railroad men, could be taken to Chicago, where they have been indicted for conspiracy to violate the section the court declared unconstitutional.

Reading Segregation Plan Near

Election of a new Board of Directors for the Reading Coal & Iron Co., following the resignation of former directors who were affiliated with the Reading Company, is taken as an indication of the proximity of the announcement of the Reading segregation plan. It has been expected for some time that the plan would be announced at any time.

Rules on Settlement for Fuel Contracts

According to a ruling by the Comptroller of the Treasury, where a contractor in his signed proposal agrees to furnish sufficient fuel to heat a Government building during a fiscal year at a stipulated price, in accordance with the requirements and subject to all the conditions of the invitation for bids and excess cost of fuel required during that fiscal year in addition to the amount at first estimated, which the contractor was unable to furnish, necessitating purchase in the open



E. J. McVann

Legal Authority on Interstate Commerce and Coal Affairs

SOON after the creation of the Fuel Administration, 1917, questions began to arise in Washington affecting the interests of the members of the Smokeless Coal Operators' Association, and a War Service Committee was created to take care of these questions. The committee had not been long in existence when its members determined they must have a Washington office and representative, and E. J. McVann was selected as that representative. At that Mr. McVann maintained offices in Washington and Chicago. He had had long experience in railroad traffic and transportation matters and in the practice of law before the Interstate Commerce Commission and similar administrative bodies.

Mr. McVann began his new duties Jan. 1, 1918 and soon found that they would absorb all his time, so he closed the Chicago office, dropped Interstate Commerce practice and devoted himself exclusively to smokeless affairs. When the Fuel Administration finally went out of business and the Central Coal Committee ceased to function Mr. McVann resumed the practice of law. In the meantime he had been made secretary of the smokeless association and still holds that office.

Mr. McVann was born in Medina, N. Y., in 1869. His parents removed to Cedar Rapids, Iowa, in 1870. He attended the schools there and had two years of "fresh-water" college at Creighton, Omaha. In 1885, as a means of getting a job in his old home town, he learned shorthand and typewriting and entered the general freight office of a local railroad. After two years of this he secured the position of traveling

freight solicitor of the Pennsylvania lines at Lincoln, Neb., and represented that organization in similar capacities at Omaha, Sioux City and Dubuque, Iowa, until 1902.

During 1901 he supplemented his salary with the Pennsylvania by acting as secretary of the Dubuque Business Men's League. He liked the work and resigned his Pennsylvania connection in 1902 to become commissioner of the Sioux City Commercial Club. He was subsequently commissioner of the Commercial Club at Omaha, secretary of the Omaha Grain Exchange and manager of the Traffic Bureau at Omaha.

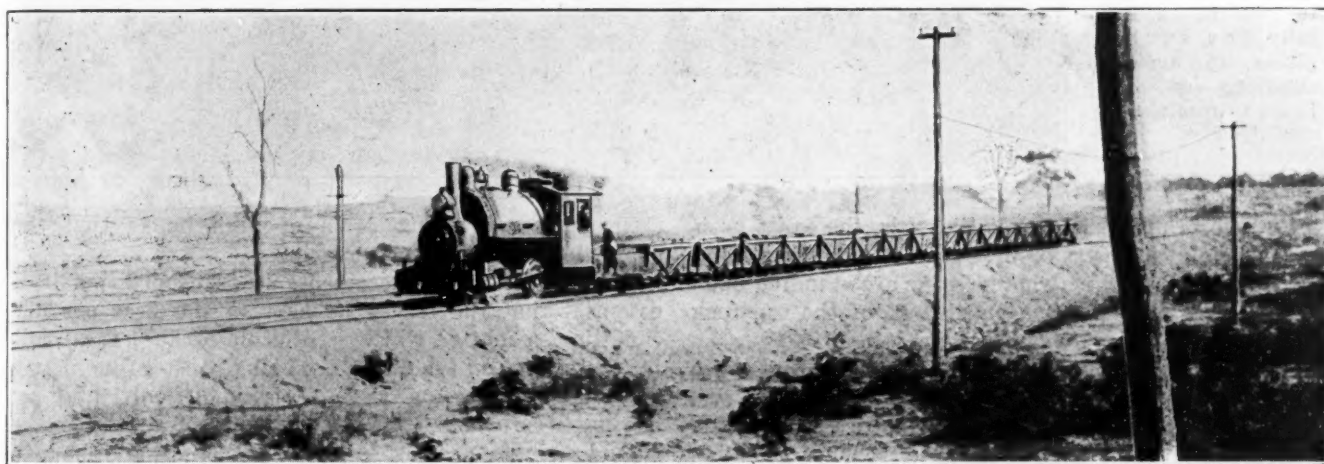
In all of these latter positions Mr. McVann's duties took him before the Interstate Commerce Commission and local commissions frequently, and he found it would be convenient to be a lawyer, so he entered the law school of Creighton University, at Omaha, in 1911 and was graduated from it in 1914 with the degree of J.L.B. and was admitted to the Bar of the Nebraska Supreme Court.

He now is a member of the Bar of the Supreme Court of the District of Columbia and of the Bar of the U. S. Supreme Court and is entitled to practice in the Federal courts and before the various Washington tribunals. In addition to his thorough knowledge of coal production and transportation Mr. McVann is looked upon as an authority on commerce and administrative law generally. His briefs upon the powers of Congress under the commerce clause of the Constitution and upon various phases of the Lever Act and other war measures have been widely circulated among lawyers and others interested in those subjects.

How the Hazards of the Anthracite Strip Pit May Be Reduced*

Accidents Occur From Swinging of Bucket, Upsetting of Shovel, Bursting of Steam Pipes, Blowing of Joints, Dressing Down of Banks, Handling of Rocks, Locomotive Derailments, Runaways, Coupling Cars and Dumping Ill-Loaded Car Bodies—Accidents Not as Numerous as in Underground Mines

By F. S. GALLUST†
Lansford, Pa.



TRAIN OF COAL CARS FROM AN ANTHRACITE STRIPPING

Small mine cars are made up into trains and sent from the strip pit to the breaker, where the coal is prepared for market with the same care as is bestowed on the coal from underground mines. The anthracite region is truly mountainous but the illustration is of an area which greatly belies the general condition.

IN THE anthracite region open-cut or strip-pit mining is coming into greater and greater use each year. The method adopted, wherever that system of mining is applicable, is to uncover the coal beds and load the coal either by shovel or by drawing the coal through openings passing into the mine below. While this system does not present the same hazards and risks encountered in underground mining, still there is a certain element of danger ever present against which precautions must be taken. Most of the accidents which occur at a strip pit, excluding those arising from blasting, can be placed under the following three heads: Steam shoveling, transportation of material and dumping of refuse.

Owing to the somewhat congested condition of the machinery too much care cannot be exercised when entering the housing of a steam shovel during the operation of such a machine. For this reason and in order to reduce accidents to a minimum, no one but the operator is allowed on the shovel while the machinery is in motion. Yet, despite precautions of this sort, accidents occur, as can be illustrated by the following instance: While the shovel was loading, and unobserved by the operator, one of the jackmen entered the housing and was at the work bench when in some unaccountable manner his foot became caught between the swinging sheave and cable, tearing off the sole and heel of his

shoe and so straining his foot that he was laid up in the hospital for a period of five months and left with a stiff foot for life. As will be noted, this accident was entirely unnecessary and would never have occurred had the man observed the rules.

MEN SHOULD AVOID BACK SWING OF BUCKET

Jackmen have often been struck by the bucket on its back swing to the pit, but in each case it has been due to the fact that the men have entered the pit from the side opposite to the shovel runner, for the purpose of rolling up a stone from the front of the shovel. They had not previously notified the runner of their intentions and, being out of his line of vision, were caught in the manner described. Accidents of this sort can be charged to nothing but pure thoughtlessness on the part of the individual. Of course there are other ways in which men are hit by the bucket. Most of these accidents occur while the men are adjusting chains, in handling boulders or when using the shovel to retrack cars that have become derailed while being loaded.

Another kind of danger, although happily an infrequent one, is that of the shovel upsetting. This arises mainly from the slippage of the blocking, the breaking of an arm or brace while the shovel is in operation, or from the shovel getting beyond control of the runner when the jacks are loosened so as to permit of moving up. Accidents of this sort are hard to guard against and endanger the lives of the entire crew.

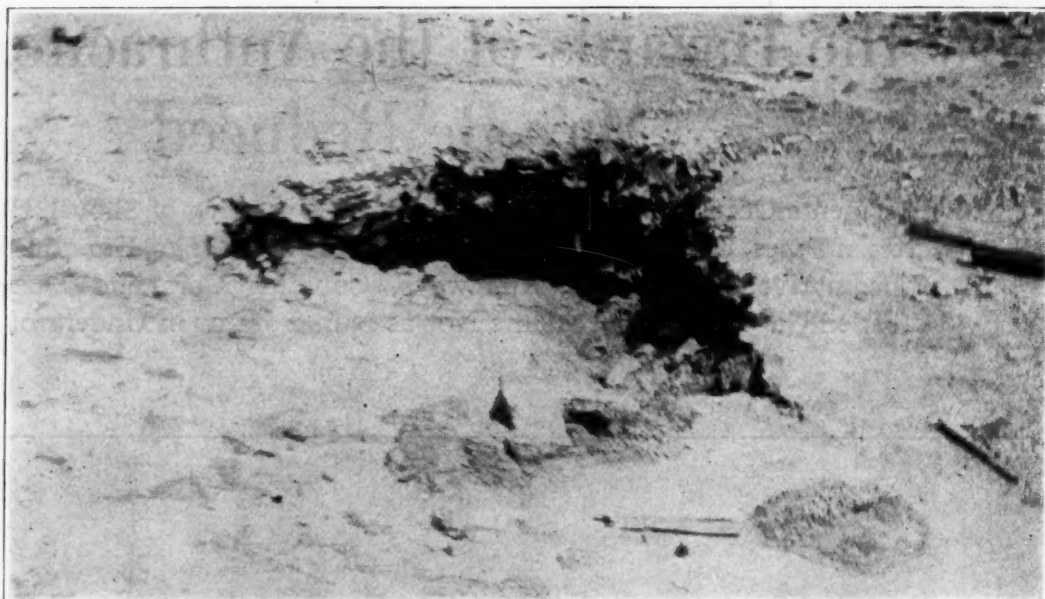
Probably one of the greatest dangers met with in stripping is encountered where work is being done to reclaim an area of coal that was partly worked years

*Abstract of paper read before the mining section of the National Safety Council, Milwaukee, Wis., Oct. 1, 1920, and entitled "Hazards Encountered in Anthracite Stripping." Comment appears in this issue under the title "Mine-Safety Experts Discuss at Milwaukee Accidents, Health and Welfare—IV."

†District superintendent of strippings, Lehigh Coal & Navigation Co.

Cave to Old Workings

In many strip pits the shovels are working coal beds that have already been partly mined by underground methods and that have caused breaks to extend through all overlying strata to the surface. The shovel-men have to watch carefully for such places to avoid engulfing or at least upsetting the shovel.



before. Quite often, in a case like this, the exact position of the old chambers or breasts is not on record and their condition—that is, whether they are standing open or have been filled up by a subsidence of the top rock and surface—is absolutely unknown.

In cases of this kind it readily may be seen that there is the ever-present danger of the ground giving way under the weight of the shovel, either drawing it down or upsetting it and thus causing a serious accident. Mishaps of this sort have been quite numerous throughout the anthracite region.

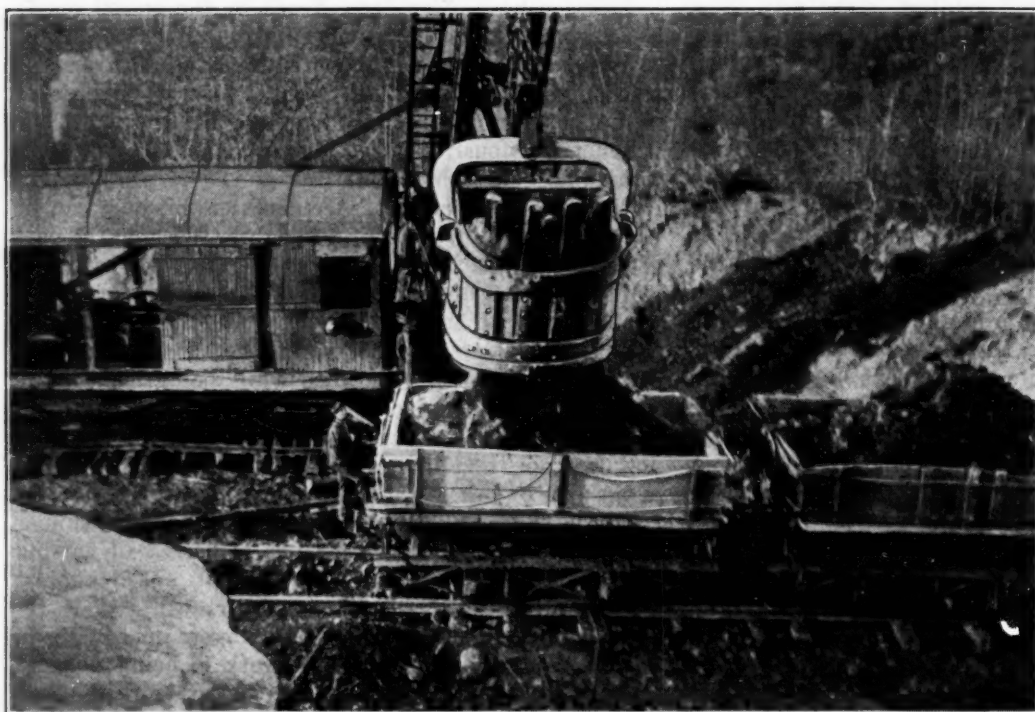
HIGH-SET ENGINES AND CABS ON LOCOMOTIVES

Bursting of steam pipes and the blowing out of joints also are frequent causes of accidents around steam shovels. Coincident with an operation of this kind there are also innumerable minor accidents, such as cut and bruised fingers, hands and feet. Some are caused by blows from hammers and pinching by bars and others result from handling rocks in the pit or

occur in the dressing down of high banks that the shovel has been unable to reach.

In order to prevent accidents in transportation it is essential that the tracks be kept in the best possible condition, a matter which is difficult because the roads in the pit and on the dump are being constantly shifted. To assure safety on a rock stripping only high-set engines with the cab mounted on the top of the frame should be used. This lessens the chance of the cab braces being torn loose from the boiler when the locomotive is derailed or when it grazes rocks that may accidentally have fallen along the side of the track. When the cab thus collides with the track or with rocks the braces are torn loose from the boiler, thus allowing the steam to escape. This accident is not infrequent, and when it occurs the engineer inevitably is severely scalded.

Then again trips are apt to run away by reason of broken couplings or from the failure of the brakes to hold back the cars when the rail is slippery. As a pre-



Loading Cars

It is not always possible to load strip-pit cars so that they will dump as soon as the bodies are released. In case the load is not satisfactorily placed in the car the men on the dump are apt to roll stones over till the balance is adjusted and if they have already released the car body and not refastened the chains the car is apt to dump its man and all, over the bank.



Another Loading Scene

As the shovel takes but few mouthfuls for a strip carload, it is not able to place it to a nicety. However, the accidents in strip pits are in general less than in underground operations.

ventive measure the engineer should be ordered to inspect the couplings on his cars at least once a day and should be cautioned to use care and judgment at all times in handling his train.

Probably the most frequent cause of injury in the transportation department arises from men getting their hands or fingers caught while coupling and uncoupling cars, nearly all stripping cars in the anthracite region being of the drawhead type with a single link-and-pin coupling. There also have been instances where men have been squeezed about the body while coupling cars, but such accidents have been rare.

Bumping a pole with a locomotive as a means of re-tracking cars is dangerous and should be discountenanced for men when trying to adjust the pole are frequently caught. It is better and safer by far to have every locomotive equipped with a pair of good retrackers for this kind of work.

HOW MEN DUMP THEMSELVES OVER SPOIL BANKS

Accidents on the spoil dump have been less frequent than in any other section of the operation, and the most serious ones have arisen directly from thoughtlessness on the part of the individuals themselves. In filling stripping cars the shovelman always endeavors to place a greater load on the dumping side, so that when the dump is reached and the dumping chains are released the car can be readily tipped. Sometimes, however, cars reach the dump loaded too heavily on the inner side, and when the chains are freed the men find that the cars will not discharge themselves. In several instances they have been known to clamber on the car to throw off some of the material on the heavy side, without remembering, however, that the side chains should be hooked before so doing. As a consequence the weight of their bodies overtipped the car and precipitated them to the bottom of the dump, some quite serious accidents resulting.

The most effective preventive for accidents of this character is to employ a short pointed dumping pole. This when placed on an angle between the floor of the car and the ground will permit the car to be tipped by merely moving the trip a few feet.

There also are numerous cases of men losing their balance and rolling down the dump while attempting to bar large rocks that have become lodged on being discharged from the car. Some of these accidents have produced permanent injuries and disfigurements. How many needless accidents occur yearly in open-cut mining it is hard to say, but if every one connected with this

work would adopt the "Safety First" slogan as his own it is certain that the number would be speedily reduced to a minimum.

Unions in British Columbia Give Battle: U. M. W. of A. Demands Wage Increase

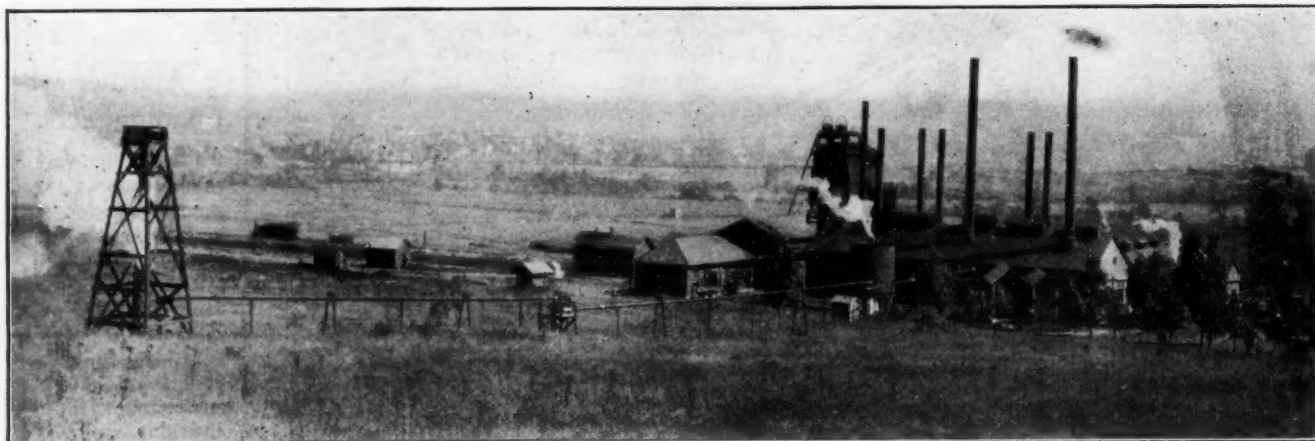
A TIE-UP of the coal-mining industry of eastern British Columbia and of the Province of Alberta has been threatening for some time, but from last reports, the crisis appears to have passed. There are two union organizations in these fields, viz., the One Big Union and the United Mine Workers of America. The O. B. U. called a strike to compel the operators to eliminate the check-off, whereby the dues of the U. M. W. of A. are taken from the mine workers' envelopes.

At the same time the U. M. W. of A. demanded that the operators reopen the recent contract and grant the daymen an advance of \$1.50 per day, thus placing the latter, so it is argued, on an equal footing with the mine workers of the Central Competitive Field in the United States. Senator Robinson, Canadian Minister of Labor, who happened to be in Alberta with the Canadian Tariff Commission; W. H. Armstrong, director of coal operations for the Canadian West, and other Government officials undertook to arrange a settlement. Although the O. B. U. strike was ordered and a percentage of the miners left work, the mediation endeavors of the Government representatives appear to have been, on the whole, successful.

None of the mines was at any time completely closed down and the latest reports are to the effect that the industry will soon be in a normal condition. At Coal Creek and in other sections of British Columbia the mines are working as usual. The claims made of a defeat for the leaders of the O. B. U. movement seem to be justified, but what adjustment has been made, if any, between the operators and the U. M. W. of A. in respect to the latter's demands on behalf of the day wage men cannot be said at present.

Lackawanna Has Two Segregation Plans

PLANS of the Delaware, Lackawanna & Western R.R. for segregation of its coal properties have been presented to the Interstate Commerce Commission by W. J. Janney, vice president of the road, in a hearing on the road's application for authority to increase its capital stock up to the amount of its surplus, which is \$90,000,000. Two plans were presented, one to deed the coal deposits to a coal company, stock in which would be taken in exchange and distributed to the railroad stockholders, and another plan to sell the coal lands to a syndicate organized by the railroad stockholders, the syndicate to organize an operating company which would give the railroad bonds for the coal properties, the minimum value of the coal lands being placed at \$60,000,000.



Utilizing Exhaust Steam for Mine Pumping

When Existing Reciprocating Pumps Proved Inadequate to Handle the Water from Two Interconnected Operations the Exhaust from These Units Was Utilized to Drive an Additional Pump—No More Steam Is Now Consumed Than Before, Though Much More Water Is Now Lifted

BY DONALD J. BAKER
Wilkesburg, Pa.

AS IS well known, the H. C. Frick Coke Co. owns and operates large coal areas in the Connellsville basin of Westmoreland County, Pennsylvania. Here the Pittsburgh bed has an average thickness of 8 ft. The Frick company having been for many years the leading operator of that seam in the Connellsville region, many of the mines which it operates are old and spread over thousands of acres.

THREE LARGE OPERATIONS ARE CONNECTED

One of the largest of the tracts owned lies in the vicinity of the town of Latrobe, which is on the Pennsylvania main line. The Dorothy mine, which obtains access to the coal by a shaft 250 ft. deep, is located in this tract and has been worked for twenty-two years. Five miles from this operation is the Baggley mine and to the east of it is another development known as the Monastery. All three of the operations are connected with one another and their combined workings cover, as may be surmised, no small area.

As the Baggley and Monastery mines are to the rise of the Dorothy operation, the latter has become the recipient of all the water which drains into the underground workings from the whole area thus undermined. When the connection was made an unusually large dewatering problem was, therefore, presented.

USE EXHAUST-STEAM TURBINE BELOW GROUND

The problem of removing the water at these mines has been met by the installation of a type of pumping equipment which probably has not been duplicated in any other mine in this country and one which might furnish a suggestion to not a few operators confronted with a difficult pumping proposition for which their present plant is inadequate.

The main water-handling units in the Dorothy mine are reciprocating pumps of the non-condensing type, using, of course, live steam for their operation. The

auxiliary pump, which is the one with the largest capacity, is operated on the exhaust steam from the smaller reciprocating unit. This unit is equipped with a condenser, so that no exhaust line to the surface is necessary. The steam thus doubly exhausted is condensed underground. But before anything further is said, let us follow the installation through from the boiler house on the surface, where the live steam is generated.

The Dorothy mine, being an old operation, does not buy its power as do most of the operators in this district. The mine was laid out and developed before the present network of high-tension lines was constructed. It was necessary for each operation to have its own power plant, unless by chance it lay adjacent to some other mine of the same concern where a power plant had been already installed.

STEAM FAVORED OWING TO GAS IN WORKINGS

Early in the life of the Dorothy mine it was decided to use steam as far as possible underground, for the mine is considered gaseous and by avoiding the use of electrical machinery the possibility of an explosion would be made more remote. Steam was provided for the operation of a steam-driven hoist which raised the loaded trips from the bottom of the basin. For the same reason steam was used for the operation of the pumps.

A 6-in. steam line extends from the boiler house on the surface to a borehole located some 500 ft. distant. The lower terminus of the borehole enters the main pumproom, which is 260 ft. beneath the surface. There two 12 x 36-in. horizontal duplex plunger pumps were installed. One of these is of Jeansville make, while the other was manufactured by the Scranton Pump Co. Each has a capacity of 1,200 gallons per min. Only one of the pumps is kept in continuous operation, the other, when the water is low, being operated at night and then only for a few hours. Each pump has a 14-in. intake and a 12-in. discharge. These two units are sufficient



Shaft at Dorothy Mine

For twenty-two years this plant has been producing coal. The area that has been excavated is large and the drainage territory is made still larger by the fact that Baggley and Monastery mines are connected with the Dorothy workings. The shaft is 250 feet deep.

during the dry months to void all the water from the Dorothy and Baggley mines.

During the winter and spring, however, when there is greater seepage through the overlying strata, more water collects at the sump than the pumps can handle, even though both are kept in continuous service. As already has been mentioned, these two pumping units are not equipped with condensers, and it was necessary to run a line to the surface for the exhaust steam. This was accomplished by utilizing the same borehole that accommodated the live steam line.

TAKES LESS ROOM THAN RECIPROCATING UNIT

When it was seen that other pumps would be required to assist in dewatering the mines it was decided to use a centrifugal pump driven by an exhaust-steam turbine, thus utilizing the exhaust from the reciprocating units already described. An installation of this nature has certain important advantages. Less space is required for the housing of the necessary machinery than with a horizontal pump operating on live high-pressure steam.

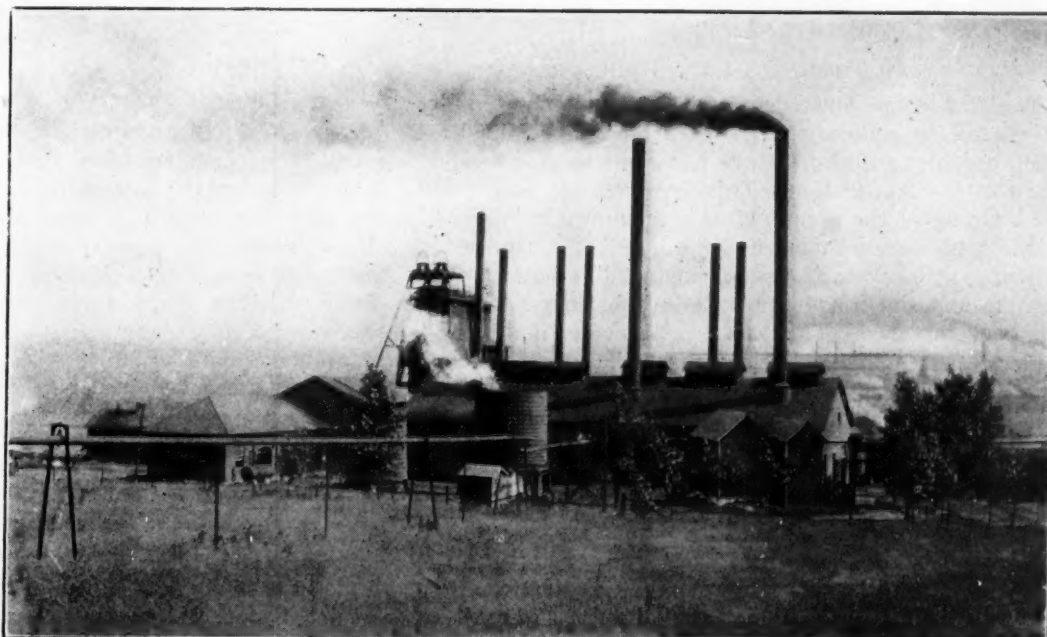
No additional expense is necessary for the construction of a separate supply line, because equipment of this sort uses steam that is ordinarily thrown into the air.

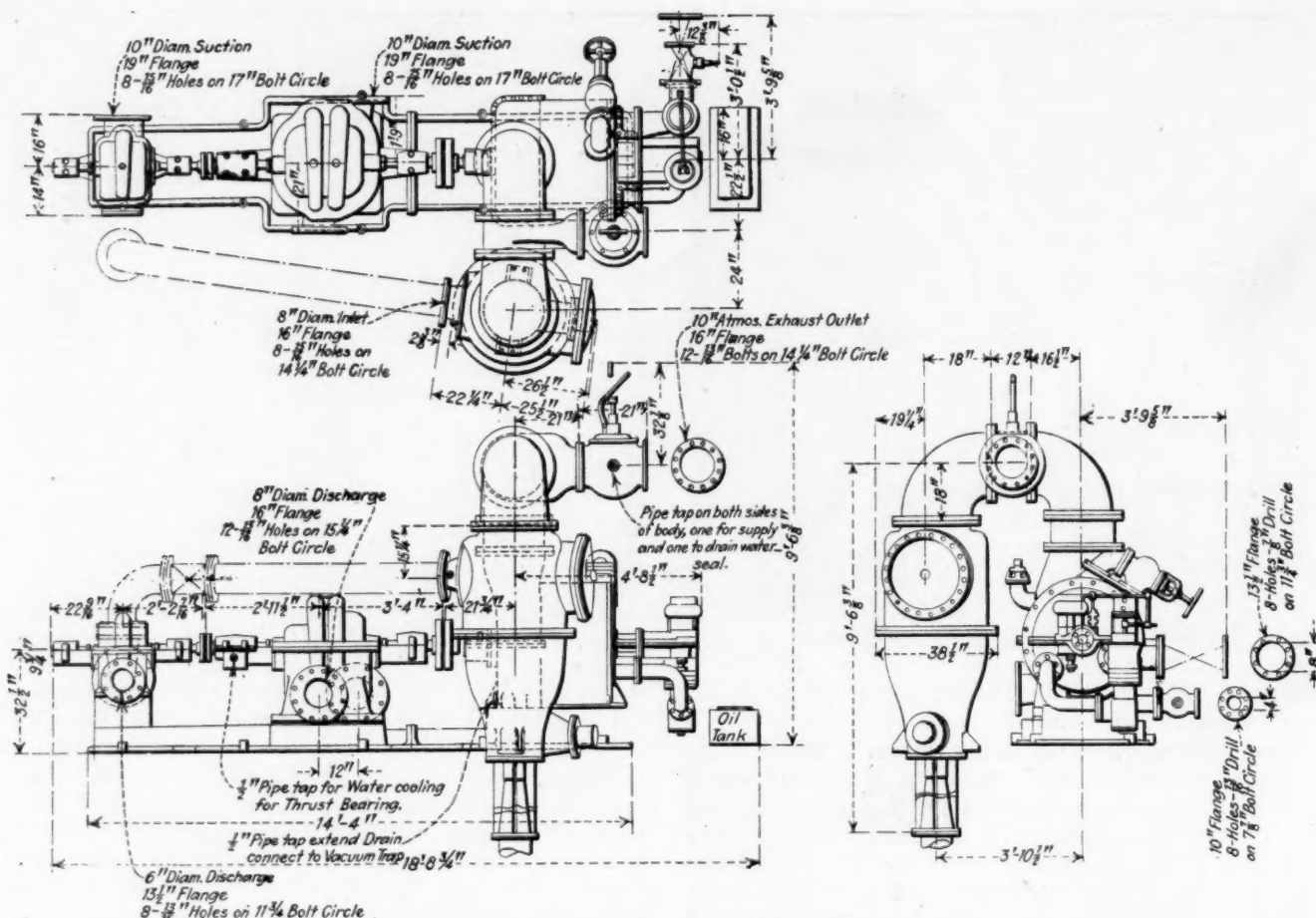
A chamber was excavated for the new installation adjacent to the mine pumproom. This was provided with stone sides and I-beam roof support. Here a turbine manufactured by the Kerr Turbine Co. was installed, a common cast-iron baseplate accommodating turbine pumps and condensing apparatus. By placing all these units on the same bedplate it was possible to economize in the amount of space required, which is a desirable feature in any underground installation.

The turbine is direct-connected to a multi-stage centrifugal pump made by the Worthington Pump & Machinery Corporation. This pump has a capacity of 1,800 gallons per minute. It discharges through a 14-in. discharge line which passes direct by a borehole to the surface. A flexible coupling is used for the connection between pump and turbine. The multi-stage pump is in turn connected to a single-stage pump which furnishes circulating water to the condenser.

Power Plant at Dorothy

The boilers in this plant were inadequate because avail was not made of the full power of the steam used in pumping. By utilizing the exhaust steam to drive a low-pressure turbine the additional power needed was obtained without increasing the boiler plant.





PLAN, SIDE AND END OF ELEVATIONS OF TURBINE PUMP AND CONDENSER

Exhaust steam, driving a turbine, operates a centrifugal pump, which lifts 1,800 gal. per min. an elevation of about 260 ft., the water being discharged through a 14-in. line, which passes direct to the surface. By the use of this equipment coal, labor and the installation of additional boilers is saved and all the added pumping needs are met.

The condenser is of the Schutte and Koerting multi-jet type and receives its circulating water at 9-lb. gage pressure. The overflow from the hot well runs back into the sump from which both pumps draw. A noteworthy detail in the construction of the turbine is the placing of its exhaust outlet so that it points vertically upward. Connection between the exhaust outlet of the turbine and the inlet of the condenser is made by suitable pipe and fittings. This arrangement of the necessary parts permits of the utilization of minimum space.

CAN START TURBINE UNDER HIGH PRESSURE

The turbine is constructed with a hand-operated bypass valve to enable it to carry a portion of the load when operating high-pressure non-condensing—that is, when starting operation. This arrangement allows for the running of the pump, while a vacuum is established in the condenser by means of the pump which provides the circulating water. In the exhaust line between the turbine and the condenser an atmospheric relief valve has been installed. This serves as a protection against high pressures should the vacuum fail.

No air pump is required with this particular type of condenser, as the design is such that the water jets entrain the air and thus carry it out. All parts of the pump and condenser that come into direct contact with the mine water are made of acid-resisting metal. Both suction and discharge lines of the pumps are constructed of iron pipe with wood-lined ends.

Water from the Monastery mine is directed to a separate sump in the Dorothy operation, from which point it is pumped to the surface by separate units.

This sump- and pumproom is located about 1,000 ft. from the one already described. Any overflow from this point will run by gravity to the main sump, where it may be handled by the steam-turbine unit.

During a wet spell last winter the emergency unit was continuously in operation for a period of nineteen days without showing any signs of distress. This is a remarkable performance for a pump operating on exhaust steam, and well illustrates the ability of such a unit to perform a prodigious amount of work under exacting conditions.

USES THE STEAM THAT IT USED TO WASTE

As regards the economies of the installation much might be said, but possibly the greatest saving of all is that attending the generation of more power without the purchase of any additional equipment. No more steam is required now than under former conditions, and no more coal need be consumed in the boiler house. Mines utilizing steam to any appreciable extent will find this type of equipment highly advantageous and capable of giving maximum effort with minimum expense.

The use of condensing apparatus around the mines is not general practice although by no means as rare as the use of superheat. The coal industry is extremely wasteful, believing in many boilers large consumption of coal and prodigal waste, as against fewer boilers with maximum utilization of the steam generated. The simplicity of the exhaust-steam turbine points the way to a fuller use of all the available or recoverable heat in steam without the scrapping of the non-condensing machinery with which the plant is already equipped.



LARGE EXHAUST LINE TO SURFACE WITH SMALLER 6-INCH INTAKE STEAM PIPE

When all the exhaust steam from the main units is being utilized, none is exhausted through the larger pipe. The derrick enables repairs to be made when necessary.

Many are the opportunities of using exhaust-steam turbines in place of standby boilers. It is better, of course, to use the exhaust steam all the time than to reserve its use for the small portion of the year when the duty demanded of the pumps is high.

Converting a Storage-Battery Locomotive To One of Trolley Type

THE company with which I am connected, in the fall of 1918 purchased a 7-ton Whitcomb single motor lead-cell storage-battery locomotive. The mine at which this machine was to be used was at that time being re-opened, after having been abandoned for several years. Delivery of electrical machinery being extremely uncertain at that time and the company being anxious to begin running coal immediately, this locomotive was purchased for temporary main-line haulage use until electrical equipment and trolley locomotives could be delivered and installed.

The locomotive was used on the main-line haul for eight months and then transferred to another section of the mine and employed as a haulage motor between

gathering partings and termini of the main-line haul. It was kept in regular use until June, 1920, with quite satisfactory results, being often loaded far above its rated capacity.

To get full efficiency from all sections of the mine we were forced to equip each parting with trolley wire so that either of the three locomotives used could run to any point in case of breakdown, wreck or delay. For this reason we no longer required a storage-battery locomotive and as the battery was by this time totally exhausted we were faced with the necessity of purchasing another trolley machine or a new set of cells. As usual, the best and cheapest way out of the difficulty was sought and I decided to change the storage-battery locomotive to one of trolley type by rewinding the motor for 250 volts, removing the cells and adding sufficient old iron to bring the total weight up to that required.

As a storage-battery machine the motor was wound for 100 volts and the fields connected in parallel on the running point. The commutator was especially large and had sufficient bars to allow rewinding for 250 volts without putting excessive voltage between consecutive bars. Therefore we had a set of armature coils made at a local repair shop with a sufficient additional number of turns per coil to take care of the increased voltage, connected the fields in series and rearranged the controller to give a five-point control.

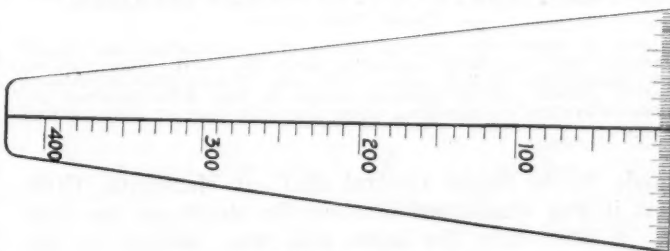
The expense of the above change was: one rheostat, \$20; one set of armature coils, \$55; one trolley pole, \$13, and a labor cost of \$61.54. This totaled \$149.54 and made a saving \$1,850 over a new set of cells and about \$4,000 over the purchase of a new trolley locomotive. In addition to this we saved the cost of charging and caring for a battery.

Handy Scale for Plotting Offsets

BY R. H. ALBRIGHT
Sharples, W. Va.

THE accompanying illustration shows a plotting scale, 100 ft. = 1 in., for plotting side notes in mine work. The need for such an instrument has been felt for some time, and since I have used this device the time consumed in plotting has been reduced about one-third. The scale is made of transparent celluloid in order that it may not obstruct a view of the map. Its edge is finely graduated and is beveled so that errors in plotting arising from the use of a tapering pencil point are reduced.

In making a plot, the longitudinal line should coincide with the survey line of the room or entry that is being



HANDY SCALE

mapped, and the scale should be moved forward thereon until a plus from a spad is reached. The rights and lefts can then be plotted from the scale and will be in every case perpendicular to the direction of the longitudinal line which represents the surveyed course.

How Men on Moving Cages May Signal to Surface and Control Mine Hoist*

In Case of Mine Fires, the Displacement of Cages from Guides and Accidents of All Kinds, It Is Well To Be Able to Signal to the Surface and Stop or Start the Hoist

BY C. A. ALLEN†
Salt Lake City, Utah

THE methods about to be described not only provide for signaling from a moving cage but also for such an arrangement of the apparatus that the hoist can be stopped by the cage rider. At the same time the installation is such that the voltage is sufficiently low to eliminate any possibility of danger from electric shock.

The first installation of this kind in Utah was at Eureka, in the shaft of the Centennial-Eureka mine. It was placed in operation, under the management of C. E. Allen, in the early summer of 1899 and has been in continuous and satisfactory use for the twenty-one years that have since elapsed.

The arrangement consists of two bare wires extending down the shaft, carrying a current at 60 volts, with a device on the cage for making a connection between them, as shown in Fig. 1. A similar arrangement was

battery current substituted for power-line current and the potential reduced to about 10 volts. This is operating satisfactorily even where the shaft is wet. The Eagle and Blue Bell mine is under the management of Imer Pett, of Salt Lake City. Several improvements have been made in the signaling device by the mine electrician, James Strong, in consultation with Leonard Wilson, consulting electrical engineer, of Salt Lake City.

To give a better idea of the possibilities and application of this system, in Fig. 2 is given a sketch of the electric wiring for the safety devices on the Eagle and Blue Bell hoist—a modern double-reel electric winder with oil-operated clutches and brakes, and with the clutch and brake on each drum controlled by different movements of the same lever.

BRAKE SET WHEN SIGNAL CIRCUIT IS BROKEN

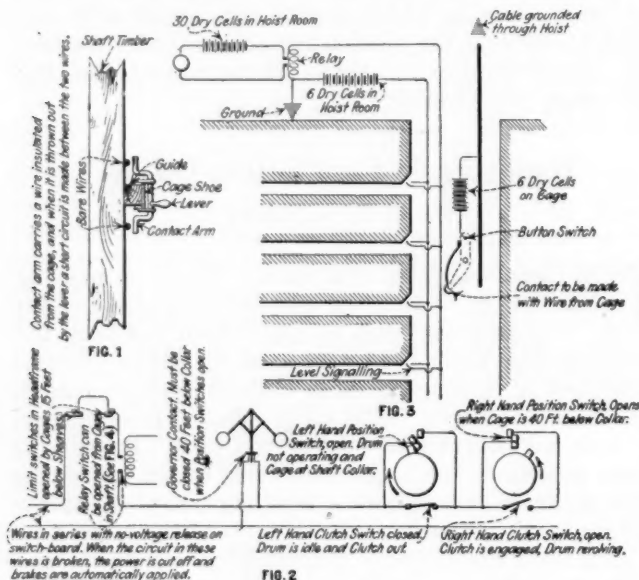
Whenever the power is cut off, the brakes are automatically applied. The switchboard is equipped with a no-voltage release and current must be maintained in the control wires of the safety devices or this release will operate, thereby shutting off the power and applying the brakes. As is shown in Fig. 2, the control wires pass through limit switches on the headframe, through a contact (B in Fig. 2 and in Fig. 4) held closed by a Western Union relay, through the governor contact, through clutch switches, and through position switches for each drum or reel.

By referring to Fig. 2, it will be noticed that if either the limit switch in the headframe or the gap at the relay switch (B) is opened the circuit is broken in the control wires and the no-voltage release operated; also if these connections remain closed but the switches and governor contacts are open the same thing occurs. The governor contact, however, is in parallel with the position switches, so that in the governor contact is closed the position switches may be open. The position switches are actuated by the same shaft which operates the indicator, and in order to allow one drum to operate independent of the other, two clutch switches are provided which close when the clutches are thrown out, thus short-circuiting the current by the position switches.

PROVISION FOR SIGNALING FROM MOVING CAGE

The wiring of these safety devices is not materially different from that used on other electric hoists and is given here only in order to show how the hoist can be controlled from the moving cage with the same wiring that is used for signaling.

In Fig. 3 is shown the diagram of the present equipment for signaling from the moving cage, and, in order to avoid confusion, the method of controlling the



FIGS. 1 TO 3. SIGNALING SYSTEMS OPERABLE FROM THE CAGE

Fig. 1 shows the original device for completing the circuit between two bare wires extending down the shaft. Fig. 2 shows an elaboration of the system with the introduction of various safety devices on the surface, while in Fig. 3 is depicted the present system for signaling either from the cage or from various levels.

made in the Grand Central shaft at Mammoth, Utah, but it was abandoned because the shaft was too wet. At a later date the same plan was adopted in the shaft of the Eagle and Blue Bell mine, at Eureka, with

*Article entitled "Signaling and Controlling Mine Hoists from Moving Cages," read before the Mining Section of the National Safety Council at the annual congress of the latter body. This paper was presented on Sept. 29, and the discussion of it may be found in *Coal Age*, issue of Oct. 7.

†Mining engineer, U. S. Bureau of Mines, and chief mine inspector, Industrial Commission of Utah.

hoist by the same wires is omitted in this sketch but is shown in Fig. 4.

Discussing only the signaling system, which is all that is shown in Fig. 3, it will be noted that the same wires are used for signaling from the levels as from the moving cage, but two sets of dry cells are employed. The conductors extending down the shaft are No. 4 bare copper wires, supported on insulators every 40 ft. To operate the signal system at the levels six dry cells have been placed in the hoist room. Whenever the

knife switch for signaling is closed on any level, the circuit is made through the two wires and through an ordinary Western Union relay. The relay closes a contact in the bell circuit, and the bell is rung by a separate battery of thirty dry cells, also located in the hoist room. Instead of using these thirty dry cells to ring the bell connection could have been made to a direct-current power or lighting circuit. The six dry cells could still be used for the shaft circuit, which is maintained at a potential of about 10 volts. This is a potential that even in a wet shaft will not give trouble from grounding and it is one, furthermore, that will not dangerously shock any one who may come in contact with it.

In order to ring the bell from the moving cage there is a contact, as shown, which, by means of the lever arm indicated by the dotted lines, can be pressed out against one of the wires (the right-hand wire shown in the sketch). This contact is simply a curved piece of brass about five inches wide, properly insulated from the cage and from the lever arm that operates it.

SIGNAL ACCIDENTALLY GIVEN BY SLIDING POST

At one time this contact was accidentally pushed out by timbers on the cage, thus giving a signal unintentionally. In order to obviate the possibility of this happening again a push button is placed in the circuit on the cage, so that it is necessary to push this button at the same time that the contact is pressed out against the bare shaft wire. The current for this circuit is furnished by six dry cells placed in a pipe on the cage. These are connected from one terminal with the cable and from the other terminal through the push button to the contact. The bare shaft wire also is grounded, as shown in Fig. 3, so that when the contact is made from the cage the relay closes the bell circuit and the bell is rung in precisely the same way as when a signal is given from a level.

Mr. Strang, the mine electrician, informs me that, in his opinion, it would be better to have the system of wiring for the signals at the level separate from those on the moving cage and to have a separate bell

for signals from the levels from that used in signaling from the cage. In order to show the separate wiring for the moving-cage signals and also to exhibit how this same arrangement can be used to stop the hoist automatically, Fig. 4 is presented.

The dry cells and contact (with the push button) on the cage are arranged in exactly the same manner, but there is only one bare wire running down the shaft. It will be noted that when the contact is made from the cage with this bare wire the current will ground through the cable and will also flow through the bare wire to the ground through the relay A and also through the relay B. The relay A is arranged so that the current passing through it will close the bell circuit, and the bell will be rung by the dry cells in the hoist room.

The relay B (see also B in Fig. 2) is so arranged that the current will open the control circuit on the hoist, which means that the no-voltage release will operate, power will be cut off from the hoist and the brakes automatically applied. In other words, by the arrangement shown in Fig. 4, whenever a person on a moving cage completes the circuit with the bare wire, a bell is rung in the hoist room and at the same time the hoist is automatically stopped.

Whether it is advisable to arrange matters so as to make it possible for a person riding on the cage to stop the hoist is a question on which opinions differ. If this is not desired, relay switch B can be removed. Even after this change is made it is still possible to ring the bell from the cage.

MOST OF THE SIGNALING DONE FROM CAGE

O. N. Friendly, general superintendent of the Judge Mining & Smelting Co., is now installing a modification

of the Eagle and Blue Bell system for use in the Daly-West shaft at Park City. By this system it is planned to do all the signaling from the cage and to have no signal device on the levels except the flash or buzzer system provided for the calling of the cage. A sketch of the arrangement is shown in Fig. 5. Double-deck cages are used, and, to make it possible for a cage tender to give signals from the cage while standing on the station at either side of the shaft, four push buttons will be installed.

Also, in order to avoid using four levers to make contact with the bare wire, one contact will be maintained at all times—a sliding contact, held in place by a spring, or a contact of the pantograph type, such as is used on certain electric railway lines.

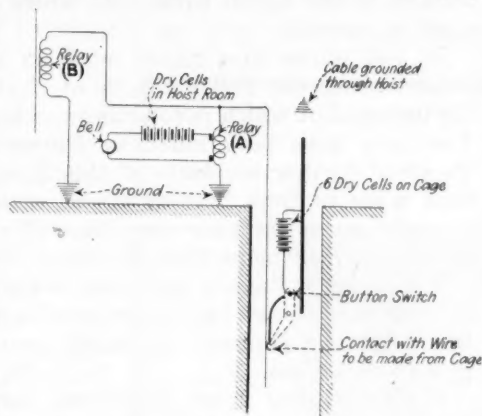


FIG. 4. WIRING DIAGRAM FOR BOTH SIGNALING AND CAGE CONTROL

Means for signaling from the levels are omitted from this sketch. It will be noted that the cable and the hoist itself form part of the signaling and control circuit.

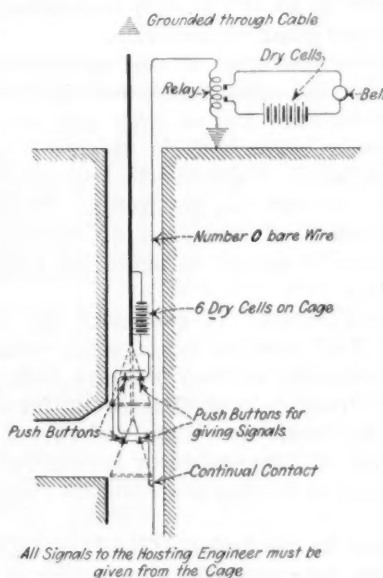


FIG. 5. ALL SIGNALS MUST IN THIS CASE BE GIVEN FROM THE CAGE

Four push buttons are installed upon the double-decked cage. These may be operated by a person on the cage or may be pushed by the cager on the level landing.

In looking over the mining papers I have found two articles describing similar signaling equipment. One appeared in the *Engineering and Mining Journal* for June 1, 1912, and described a patented device in which a flat strip was used instead of a bare wire. The other article, appearing in the *Bulletin of the American Institute of Mining Engineers*, February, 1914, describes an arrangement similar to those here illustrated, which was being used by the Penn Iron Mining Co. in Michigan.

As before stated, there are two highly important safety considerations involved in the use of these signaling systems. The first is the ability to signal from a moving cage, and the second the low-voltage current employed. By using such low voltage no danger is incurred from electric shocks, and, if the bare wires are continuously charged, the danger of a "short" to wet timbers is slight. The Eagle and Blue Bell shaft is 2,000 ft. deep and wet in places, yet no trouble has been experienced.

In the system being installed at the Daly-West shaft another danger also is avoided. This is the possibility of a careless or ignorant employee giving a signal from the station when the cage is at some other point in the shaft. Accidents not infrequently occur from the premature starting of the cage, despite the fact that signs are placed warning all employees (except the cage tender) to keep their hands off the signaling system of the hoist.

Supplies Acetylene for Welding Purposes

TO AVOID being dependent on compressed acetylene for use in welding and cutting operations, acetylene generators have been manufactured in various sizes, having a capacity of from 15 to 100 lb. and furnishing 15 to 100 cu.ft. of gas per hour respectively.

It is asserted by the manufacturers of this apparatus that it possesses two marked advantages, namely: A simple and positive carbide feed and an even and constantly-maintained pressure. The carbide of size $\frac{1}{4} \times \frac{1}{2}$ in., is fed into the water by a simple vibrator actuated by the flow of gas through the apparatus. Thus whenever the torch is shut off the feed of carbide ceases, but when the torch is turned on again the carbide feed is again started.

Pressure within the generator is controlled by a spring and diaphragm. This combination together with the automatic feeding maintains an even pressure under all service conditions. Pressure control is so uniform that a torch will burn for hours at a time without adjustment of the torch valves. No regulator is required except in cases where several torches are operated from the same generator.

This generator is said to be foolproof and so constructed as to compel the user to follow the proper sequence of operations in filling, starting and shutting off. A reliable safety valve makes it impossible to obtain more than 15 lb. pressure, which is the maximum allowable for acetylene gas.

The gas-purifying portion of this apparatus, through which all the gas passes on its way to the torch, is provided with a water seal. This serves a double purpose—it cools the gas and absolutely prevents any back-flash reaching the generator proper.

As stated above, this device is made in various sizes. The smaller of these may be provided with hand trucks

The experience in signaling which has been gained in Utah causes me to believe that not only are the methods for signaling from the cage which have been described highly valuable from a safety standpoint but to feel also that it is absolutely necessary to have low voltage on any signal wires with which employees may come in contact.

In coal mines bare signal wires in many instances extend along the entire length of a slope or incline, the potential of which is sometimes as high as 500 volts. Two men have been killed by 230-volt signal wires. To avoid further accidents of this kind, provision has been made in Utah that no signal wires may be used in metal mines carrying more than 25 volts, or in coal mines carrying more than 50 volts.

The higher voltage is permitted in coal mines because on long slopes—say two miles long—a voltage such as this might be necessary to supply enough current to give clear signals.

I have learned from experience, however, that by using a relay at the hoist this voltage would be sufficient for any distance over which haulage is practicable. It is also required that all shafts over 500 ft. deep and through which fifty or more men are hoisted or lowered daily by means of cages, placed in operation hereafter, must have the signaling system so arranged that the hoisting engineer can be signaled from the cage while it is in motion at any point in the shaft between levels.

to insure portability, while the largest size is not infrequently permanently installed, usually in a small building just outside the shop in which the acetylene is to be used. The employment of an acetylene generator renders the owner independent of a compressed supply. Carbide can in most cases be secured locally and the cost of making acetylene in this way is much less than the expense involved in purchasing the gas in the compressed form, while the money "tied up" in equipment is not much greater than would be involved in keeping a sufficient stock of compressed-acetylene cylinders on hand.

The automatic acetylene generator just described is known as the Imperial and has been placed on the market by the Imperial Brass Manufacturing Co., of 1200 W. Harrison St., Chicago, Ill.

Texas Miners Get Raise in Tonnage Rate

A STRIKE of mine workers in Texas, which involved more than 1,000 men and affected the fields about Strawn, Thurber and Bridgeport, has recently been settled. The operators gave the miners a wage advance of 25c. a ton. The workmen at first demanded a 60c. advance over the scale of \$2.40 which they were receiving. This would have made the scale \$3 a ton. It also was agreed that if the mine workers in Oklahoma, who are now seeking an increase wage from the Oklahoma coal operators, are granted a larger increase than 25c. a ton, the Texas operators are to make the scale in this state the same.

The agreement to end the strike was reached at a conference held in Fort Worth, Texas, which was attended by representatives of both the Texas coal operators and mine workers. Judge E. B. Ritchie, of Strawn, attorney for the operators, was their chief spokesman, and W. K. Gordon, of Thurber, presented the brief for the mine workers. When the agreement was reached it was taken at once to the mines for ratification. The mine workers at Bridgeport immediately ratified it, while those at Strawn and Thurber took similar action shortly afterward.

Major Irving Ariel Stearns Dies

Introduced in Anthracite Region High-Pressure Boilers, Underground Electric Haulage and High-Pressure Compressed-Air Haulage—Was Manager of P.R.R. Coal Interests for Twelve Years, Then President of Large Coal Corporations

MAJOR Irving Ariel Stearns died at his home 60 South River Street, Wilkes-Barre, Pa., Tuesday, Oct. 5, 1920, of pneumonia, after an illness of about a month. In his death the Wyoming Valley loses one of its most eminent and best-loved citizens, and the loss of so strong a participant in the activities of the valley will leave a gap difficult to fill, as, despite his more than three score and fifteen years, Mr. Stearns at the time of his death was president of the Wilkes-Barre City Hospital, the Wyoming National Bank and the Wyoming Historical and Geological Society; chairman of the board of the Vulcan Iron Works, and a director of the Spring Brook Water Supply Co. and of the Wilkes-Barre Lace Manufacturing Co.

Irving Ariel Stearns came of New England stock, being a descendant in the eighth generation of Charles Stearns, who was admitted freeman in Watertown in 1646. He was born Sept. 12, 1845, in Rushville, N. Y., a son of George W. and Miranda (Tufts) Stearns, and was graduated from the Rensselaer Polytechnic Institute of Troy, N. Y., in the class of 1868, which included among its members a number of men who later achieved distinction in the fields of engineering and scientific research.

HAD VARIED ENGINEERING EXPERIENCE

After graduation he was assistant professor of chemistry in charge of the analytical laboratory for a year, and went to Wilkes-Barre in 1869 as engineer in the office of R. P. Rothwell, then the leading mining engineer of the region. From 1871 to 1872 he was superintendent of the McNeal Coal & Iron Co., of Schuylkill County, Pennsylvania, and in 1872 succeeded to Mr. Rothwell's business when he left the region to take charge, as editor, of the *Engineering and Mining Journal* of New York.

From 1872 to 1885 Mr. Stearns was in private practice as a mining engineer, handling a great amount of business in the anthracite region, including the building of the bridges at Shickshinny and Pittston and the surveying and mapping of many of the individually



operated mines. His practice soon extended throughout the country, with numerous examinations and reports upon mining properties in Pennsylvania, Virginia, West Virginia, Arkansas, Colorado, California, Wyoming, Idaho, and Utah, and he was responsible for the design and execution of the Lehigh Valley Railroad Co.'s great Tift Farm Improvements at Buffalo, N. Y., including canals, docks, coal stocking plant, etc.

He was commissioned quartermaster of the Ninth Regiment, N. G. P., March 29, 1880; was promoted to major May 15, 1884, and resigned April 1, 1885. He always retained an interest in the National Guard and for a time he was president of the Ninth Regiment Armory Association.

At the age of forty Mr. Stearns was one of the best known mining engineers in the United States, and his eminence in his profession led to his appointment in the autumn of 1885 as manager of the various coal interests owned and controlled by the Pennsylvania Railroad Co., which position he held until July, 1897. During that time he brought the properties of which he was in control to a high state of efficiency. He was, in fact, personally responsible for the introduction in the anthracite region of high-pressure boilers, the first of which were put in at Shamokin; of underground electric haulage, the first in the United States and the second in the world having been put in the Lykens Valley Colliery in 1886, and of high-pressure compressed air haulage in 1895. He also introduced radical improvements in mining and in the preparation of anthracite coal.

In July, 1897, Mr. Stearns was chosen president of the Cross Creek Coal Co., Coxe Brothers & Co., Inc., the Delaware, Susquehanna & Schuylkill Railroad Co., and the Coxe Iron Manufacturing Co. and held these positions until the sale of the properties to the Lehigh Valley Coal Co. in the autumn of 1905. During his tenure of office his genius for organization brought the mines of these companies to a high degree of operating efficiency.

The sale of the Coxe properties found Mr. Stearns

sixty years of age and tired from thirty-seven years of continuous and most active service, so he decided to retire from business and devote the remaining years of his life to broader channels of usefulness. As soon as he was free from direct business engagements his abilities were heavily drawn on by his home community. On Nov. 30, 1906, he was elected the first president of the Wilkes-Barre Park Commission, which office he held for ten years. At that time the only park lands owned by the City of Wilkes-Barre were two tracts patented in 1804. One was known as the River Common, extending from South to Union Street along the Susquehanna River, and the other the Public Square.

During his two terms as Park Commissioner the River Common was converted from an eyesore to its present condition, while the Public Square was remodeled and Hollenback Park, Riverside Park, Frances Slocum Playground, and numerous small parks and playgrounds throughout the city were acquired and improved, giving to the city its present park system, acquired almost entirely by gift as the result of Mr. Stearns' personal efforts.

His clear-headed judgment and sound common sense were in great demand by the business interests not only of the Wyoming Valley but of other sections of the country, for besides holding the positions above noted he was at different times director of the Lehigh Valley R.R., Lehigh Valley Coal Co., Chatham & Phenix National Bank of New York, Standard Trust Co. of New York, the Hibbard-Rodman-Ely Safe Co. of New York, Spring Brook Water Supply Co., Spring Brook Water Co., Wilkes-Barre Water Co., Wyoming National Bank, Vulcan Iron Works, the Gas Company of Luzerne County, Wilkes-Barre Electric Light Co., People's Telephone Co. and the Penn Mining Co. of Wyoming, of which latter he was president.

Mr. Stearns was a member of many societies and clubs. He was one of the organizers of the American Institute of Mining Engineers, founded in Wilkes-Barre in 1871, was vice-president in 1905-6, and at the time of his death was one of the three living original members of the institute. He was the first president of the Westmoreland Club and an active member throughout its entire history; a past president of the Wyoming Valley Country Club, and at different times was a member of the American Society of Civil Engineers, the Union League Clubs of New York and Philadelphia, the Engineers and the University clubs of New York, the Franklin Institute of Philadelphia, and of the Blooming Grove Club of Pike County, Pa.

He took great interest in the Wyoming Historical and Geological Society, of which he was president for many years, and in the Wilkes-Barre City Hospital, of the board of which he was a member for more than a generation, and of which he was president at the time of his death.

Mr. Stearns married Nov. 20, 1872, Clorinda W. Shoemaker, eldest daughter of L. D. and Esther (Wadhams) Shoemaker, of Wilkes-Barre, who died May 6, 1904. Of their three children, Captain Lazarus Denison Stearns, born Dec. 27, 1875, gave his life to his country as captain in the Ninth Regiment, N. G. P., during the Spanish-American War, Sept. 6, 1898; Irving Ariel Stearns, Jr., born July 5, 1877, died April 9, 1884; Esther Shoemaker Stearns was married April 14, 1910, to Harold Mercer Shoemaker. She with their two children, Irving Stearns Shoemaker and William

Mercer Shoemaker, are the only surviving descendants. Mr. Stearns' only sister, Mrs. A. J. Aldrich, lives at Coldwater, Mich.

Anthracite Miners Live Long and Heartily

IN CONNECTION with your article in *Coal Age* of Sept. 9, 1920, which recorded the services of Michael Hanahue, of Pittston, Pa., I wish to call your attention to the following:

Joseph Henry Sobey, of Jermyn, Pa., was born on Aug. 3, 1860, and is therefore 60 years of age. Mr. Sobey started to work at the Jermyn Colliery, in Jermyn, in 1873. This colliery was then owned and operated by the late John Jermyn, pioneer coal operator. During the month of September, 1876 (at the time of the Centennial celebration in Philadelphia), Mr. Sobey began to mine coal and he continued to engage in that work in the same colliery until Jan. 5, 1920, when he received an unlimited leave of absence in order to enable him to accept a position in the assessment department of the County Commissioners' office at Scranton, Pa. In 1896 Mr. Sobey was elected Borough Assessor in Jermyn and has since served continuously in that capacity, and has developed into an authority on assessments.

During this entire period of almost forty-seven years' continuous service as a mine worker, Mr. Sobey has never received a serious injury in connection with his work, and at present has the appearance of a man of forty-five years of age.

The John Jermyn interests operated the Jermyn Colliery for about nine years after Mr. Sobey began to work there, and it was then purchased by the Delaware & Hudson Co. (now the Hudson Coal Co.), which company has operated the colliery since that time. During his period of service Mr. Sobey has worked under eight different mine foremen, viz.: Alfred Green, Robert Carter, John Kearner, Joseph Tennis, Thomas Evans, Thomas R. Thomas, Andrew Patton and Joseph Shearer.

Mr. Sobey was a charter member of the keg fund at the Jermyn Colliery, and still retains his membership, and expects to be able to mine coal for many years after his work is completed in the Commissioners' office.

Temple Coal Co.,
Scranton, Pa.

F. H. HEMELRIGHT,
Vice-Pres. and Gen. Mgr.

Oklahoma Refuses to Give New Wage Scale

COAL-MINE workers of Oklahoma have presented demands for increased wages amounting to approximately 25 per cent. These have been denied, at least tentatively, by the operators. Some talk of a strike can be heard, but at present only a few men are out. The operators assert that they cannot meet the demand for higher wages; that the mine workers are now under contract, made in good faith, and that they see no reason why the mine workers should not live up to their engagements. Operators assert that the increased wage would enhance the cost of mining coal in Oklahoma to such an extent that coal could be mined in other states and shipped into Oklahoma and sold at a profit at prices below the cost of mining in Oklahoma.

The operators have appointed a committee consisting of Dorset Carter, president of the Oklahoma Coal Operators' Association; J. B. Wilson, State Commissioner of Labor, and J. B. Puterbaugh, coal operator of McAlester, to meet representatives of the mine workers in an effort to adjust the differences existing between them. This conference is to be held in McAlester.

Mine-Safety Experts Discuss at Milwaukee Accidents, Health and Welfare—IV

How Accidents in Stripping May Be Avoided—How to Upset Badly Loaded Strip-Pit Car Bodies—Use of Fusees at Night to Mark Location of Impending Blasts—Proposition to Co-operate with Bureau of Mines Approved—Directing Heads for Fiscal Year Elected

BY R. DAWSON HALL
Editor *Coal Age*

TWO papers were read at the last session of the mining section in reference to the dangers of open-pit mining, a subject that hitherto has not been treated but one which gathers increased importance year by year as strip pits become larger and deeper and the number of men employed is augmented. The depth of stripping constantly increases. Every year unfolds new possibilities. The biggest development in coal strip pits yet to be attempted is probably the use of larger dump cars with dump gates operated by compressed air. With a spreader operated by the locomotive the berm will be maintained without the present excessive cost for labor. The iron regions have gone far ahead of the coal region in this direction, and consequently D. E. A. Charlton's admirable paper on the "Hazards Met in Open-Cut Mining," which had special reference to iron-ore strip-pits, is the more significant and valuable. Mr. Charlton has had much experience in that class of work. He is managing editor of the *Engineering and Mining Journal*, New York City.

The paper of F. S. Gallus, district superintendent of strippings of the Lehigh Coal & Navigation Co., on "The Hazards Met in Anthracite Stripping" was read by Mr. Tillson. Attention was drawn by Mr. Charlton to the statement: "No one but the operator is allowed to enter the shovel while the machinery is in motion." Yet, despite precautions of this sort, accidents will happen, as is shown by the following instance: "While the shovel was loading, and unobserved by the operator, one of the jackmen had entered the shovel and was at the work bench when in some unaccountable manner his shoe got caught between the swinging sheave and the cable, tearing off the sole and heel, with the result that the man was laid up in the hospital for a period of five months and will have a stiff foot for life. As will be noted, the accident was entirely unnecessary and would never have occurred had the man observed the rules." Mr. Charlton asked Mr. Martinson if a housing had not been devised to make this accident impossible. Mr. Martinson said that this had been done and that all the shovels of the Pickands Mather Co. were so equipped.

Mr. Reed called attention to the statement: "The men on the dirt dump have been known to clamber on the car to throw off some of the material on the heavy

side without previously hooking the side chains. As a consequence the weight of their bodies overtopped the car and precipitated them to the bottom of the dump, causing serious injuries. The best preventive for such accidents is to provide for the tipping of the wagon body by the use of a short pointed dumping pole which when placed on an angle between the floor of the car and the sills will permit the cars to be tipped by merely moving the trip several feet."

Mr. Reed questioned whether this proposed plan was not somewhat dangerous. If he understood the plan aright, it was one that was at one time quite a common practice at the mines of the

Consolidation Coal Co. for the replacement of derailed cars, but is now strictly forbidden, as the man's fingers might be badly pinched by the movement of the pole. Mr. Charlton said that hand holds were provided on the pole and that he believed the practice safe.

Mr. Reed said that the addition of hand holds had been suggested in safety conferences of the Consolidation Coal Co., but the plan was rejected, as there was a possibility that the whole hand would be drawn in and the hand lost in place of the fingers. Mr. Charlton said that in the iron region all these risks had been removed by the introduction of the 30-ton dump car actuated by compressed air.

Mr. Martinson said that the introduction of flood lighting at open-pit night work had done much to make such work safe. He added that whistle signals had been done away with as a warning of blasts. They put the men on their guard, but did not show them where the danger existed, and so they might run into it rather than away from it. Now, whenever blasting was to be done, a red-light railroad fusee was ignited, and the exact spot where the blasting was to be done was indicated.

CO-OPERATION WITH BUREAU DISCUSSED

Mr. Tillson stated that he had been much possessed of the idea that the National Safety Council and the Bureau of Mines might gain greatly by a closer co-operation. The National Safety Council could not afford as yet a paid secretary for the mining section. In fact, none of the industrial sections had a paid secretary. That arrangement was limited so far to the local sections of the council.

Mining section discusses the dangers of strip-pit operation and the means for reducing them. It gives favorable consideration to a method whereby, without great expense, the services of a secretary could be obtained who would give his whole time to the work of the section. No important change is made in the official personnel for the present year.

This Twin Shaking Screen Has a Novel Delivery Gate

Changes in Shaker Eliminate the Knocking Screen, and Attached Chutes Carry the Coal to a Conveyor

THE accompanying drawing shows a simple arrangement of chutes and gates devised to permit of separating egg and slack coal from run of mine. It also will deliver them into belt conveyors or put either or both back into the run of mine, as may be desired.

The original arrangement included a knocking screen under the shaking screen. This knocker delivered the slack to the left-hand belt and the egg to the right-hand belt. By putting plates over the screening surface of the knocking screen both the slack and egg coal could be returned to the run of mine, but it had to be both or neither.

KNOCKING SCREEN AND CHUTES REMOVED

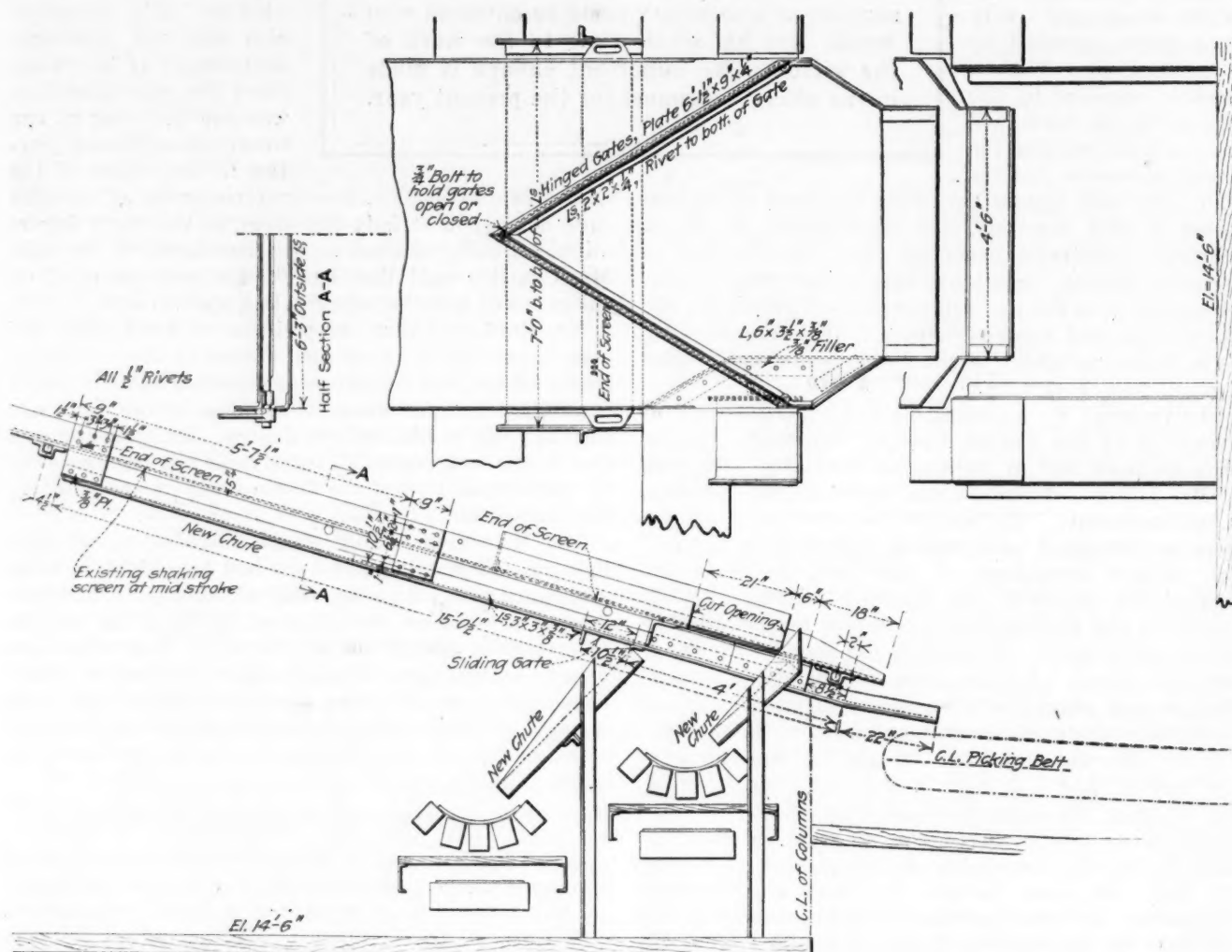
The changes made were: Removal of the knocking screen with its chutes, shafting, etc.; the cutting of openings in the sides of the shaking screen, and the fitting of a pair of hinged gates so arranged as to guide the coal to these openings. These gates close the openings when such closure is desired.

A new chute was made and riveted to the underside of the shaking screen, as shown. This chute was fitted with a sliding screen in the lower end just beyond the screening surface. A new chute was put in place to convey the slack coal from the sliding gate to the left-hand belt conveyor, also two small chutes to carry the egg coal from the openings in the sides of the shaking screen to the right-hand conveyor.

TWO CONVEYORS SERVE THREE SETS OF SCREENS

Three sets of these screens and picking belts are installed in the bankhead as now altered. Since all three are duplicates, however, the drawing shows only one set. The two belt conveyors shown serve all three sets of screens.

In operation when the hinged gates are closed as shown the egg coal will be delivered to the belt conveyor. When the gates are opened, however, the egg coal travels onto the picking band, where it mingles with the run of mine, which is delivered to the picking table by another chute above the shaking screen, not shown in the drawing. Similarly, the slack coal that passes through the upper screen onto the new chute below can be delivered onto the belt conveyor by opening the sliding gates. If, however, these gates are closed, the slack coal is returned to the run of mine on the picking belt. The sliding gate is located be-



SHAKING SCREEN WHICH WILL DELIVER EGG AND SLACK OR RUN-OF-MINE

By cutting openings in the side of the shaking screen and adding hinged gates so as to direct the coal to these openings, the egg can be diverted to the right-hand belt conveyor, while a sliding gate in the lower chute directs the slack to the left-hand belt conveyor. When hinged gates in the screen and the slide gate in the chute are opened, the egg and slack pass onto the picking belt, combined to form run-of-mine.

yond the end of the screening surface on the shaker, so that all the slack screened out will pass through the gate when it is opened.

As will be seen, the operation of the gates in each chute is independent of the other chute. This permits the separation of either or both grades of coal, as may be required, with a minimum of trouble. The cost of making the change was small, and a saving of power and upkeep is effected by reason of the elimination of the knocking screen with its driving shafts.

Hoisting Engine Has Given Service For a Half Century

Still Uses Steam at Forty-Pounds Pressure and an Ordinary Stephenson-Link Reversing Motion with D Slide Valve

BY FRANK H. KNEELAND*

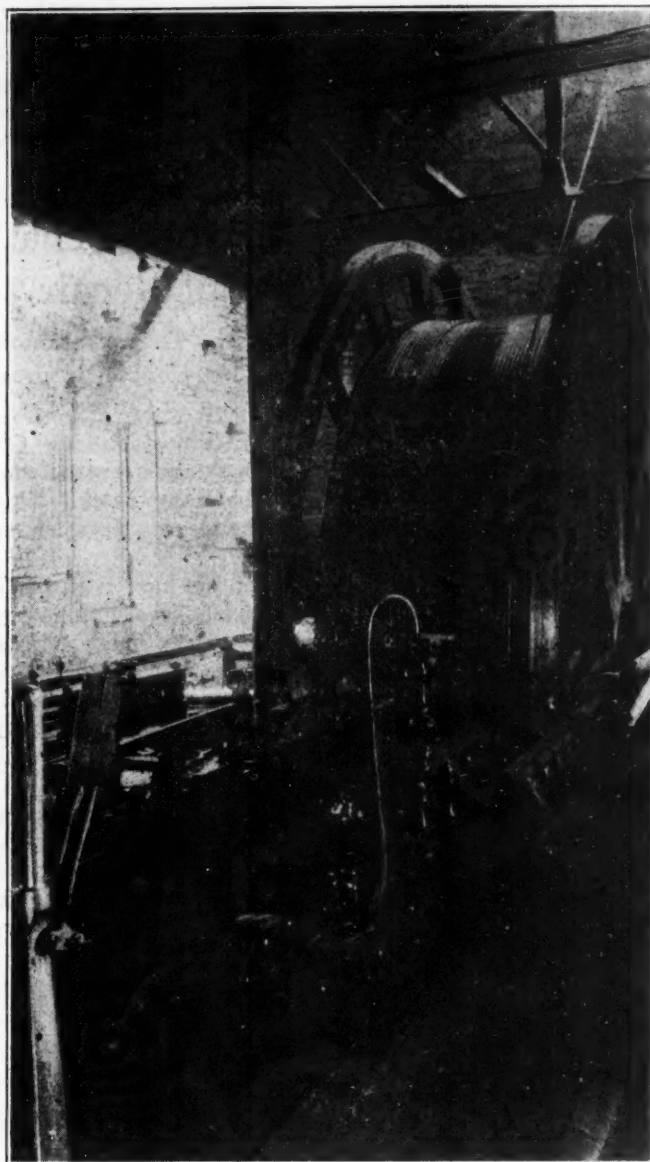
IT SEEMS to be a characteristic trait of certain English machine builders that they so construct their products that they last almost indefinitely. Permanency seems to be the primary aim of the designer. In this country, on the other hand, improvements in many lines, particularly power-generating units, are so rapid and follow each other in such close succession that machines become obsolete within an extremely short time after installation. Occasionally, however, one sees an engine, boiler or generator that has given many years of honest service and is still in such condition and gives such results as to retain its place in the present equipment by reason of its economy and all-around efficiency.

The Nova Scotia Steel & Coal Co. at its No. 1 shaft on Cranberry Head, Sydney Mines, N. S., has in operation a hoisting engine that is now almost a patriarch among such machines employed west of the Atlantic. This engine was built in 1868 by E. & J. Joicey, of Newcastle-on-Tyne, and installed in its present position in 1872. The shop number of this machine is 29. The cylinders are 36 x 60 in. and the pistons are fitted with rear or tail guides. The hoisting drum is 18 ft. in diameter and 4 ft. 5 in. long. It is built up of two skeleton ends or spiders each 22 ft. in over-all diameter, the rims being faced with wooden segments for braking. Between these spiders extends 7-in. oak lagging.

ENGINE OPERATES AT 40 LB. PRESSURE

This engine uses an ordinary Stephenson-link reversing motion and a D slide valve for steam distribution. Steam is supplied from the present boiler plant through a reducing valve that lowers its pressure to 40 lb., at which pressure the engine operates. For many years this machine was supplied with steam from conical-headed or "egg-end" flueless cylindrical boilers. These were discarded about 1880 in favor of more modern equipment. The present boilers are water-tube stoker-fired units.

Repairs on this engine since its installation have been practically negligible. A spare cylinder was procured when the machine was purchased, or shortly afterward. This was put in place and one of the old cylinders was rebored fourteen years ago. At the same time all small moving parts, such as links, pins, eccentrics, eccentric straps and the like were renewed. These parts were made locally, and within five years they showed more



ANCIENT HOISTING ENGINE STILL AT WORK NEAR CRANBERRY HEAD, SYDNEY MINES, N. S.

Built when Grant first became President and erected in the year when he began his second term, this engine has had a long span of service. Art is indeed long and life is truly brief. E. & J. Joicey, the constructors, perhaps little thought in 1868 that their engine still would be hoisting coal in 1920.

wear than the parts they had replaced. The drum was relagged fourteen years ago and the material then put in place shows little wear at present and looks as if it would last for at least fourteen years more.

HAS HOISTED CAGE IN TWENTY-ONE SECONDS

This engine hoists two cars of coal at a trip through a vertical distance of 711 ft. Twelve revolutions land the cage. Steam is given for eight revolutions while the balance of the way the machine drifts or is "plugged." A hoist is normally made in thirty-five seconds, but cages have been landed in twenty-one seconds, and to make a hoist in twenty-eight seconds is not uncommon. This machine not only raises coal but lowers material, and morning and evening it hoists and lowers men.

Although this machine "handles" easily, the only thing that it appears to wear out is the men that drive it. Harry Frazer, who took charge of this hoist soon after it was installed, operated it without missing a day for over thirty years before he finally went the way of all

*Editorial staff, Coal Age.

flesh and blood. Joe Betts, the present hoistman, has been at the throttle for somewhat over fifteen years. When I talked with him last fall, although still looking decidedly fit, he expressed the belief that he would not be able to make this old engine obey his touch for more than about fifteen or twenty years longer.

Drum-Contactor Controller That Reduces Frequency of Repair

Rolling Motion of Contacts Lessens Deterioration of Tips—Slight Wiping Motion of Final Contact Insures Minimum Resistance to Passage of Current

THE Westinghouse Electric & Manufacturing Co. has designed a new type of manually-operated controller, known as the type "S" drum contactor. This employs practically the same principle of operation as do magnetic contactor controllers.

During the last year exhaustive tests have been made on these devices and in practically every industry numbers were placed in severe service. These service tests have indicated that the construction of this type of controller is far superior to that of the drum-and-face-plate controllers formerly used. It combines many of the advantages of magnetic contactor controllers with small size, simple construction and low cost.

These controllers will be ready for the market soon and will be used for starting and regulating the speed of shunt, series and compound-wound direct-current motors through the adjustment of the resistance in series and parallel with the motor armature. They are

suited to practically all machines employing this system of control.

In operation they employ the same principles as do magnetic-contactor controllers, except that the contactors are operated by cams mounted on the main shaft. Normal movement of the controller handle causes the contactors to open or close with a quick, positive action that reduces arcing. Arcing is further reduced by the rolling motion of the contacts, which lessens deterioration of their tips. Consequently there is no pitting, roughing or burning of that part of the contacts where the load current is carried. Final contact is made with a slight wiping motion, which insures clean surfaces and maximum current-carrying capacity. The line contactors, which open and close the main-line circuit, are protected by magnetic blow-outs, which aid in extinguishing any arcing that may occur.

Each contact element is complete in itself and can be removed as a unit. Stationary and moving contacts are identical and interchangeable with those of Westinghouse auto-starters and magnetic-contactor controllers.

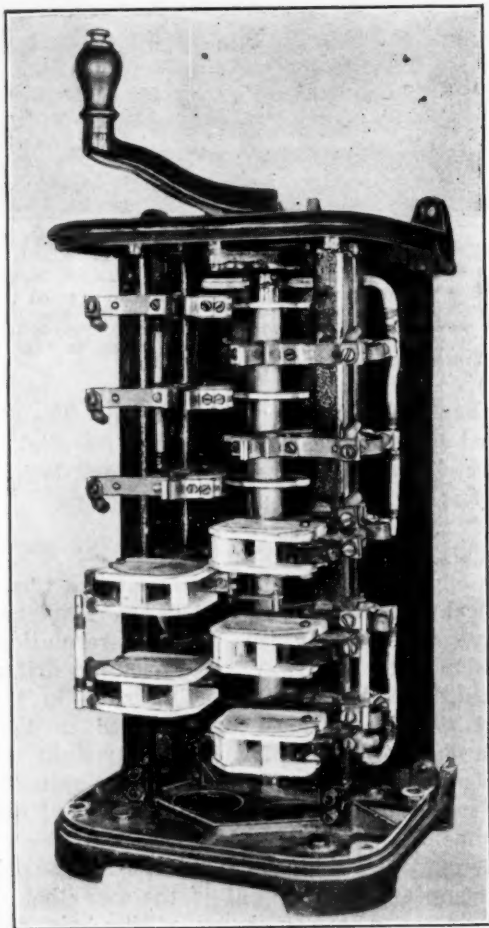
All controllers are drilled and tapped for both a horizontal and vertical handle and can be supplied with either. Horizontal handles in service can be readily replaced with vertical ones or vice versa. The vertical type is fastened to the top of the controller by four bolts spaced equidistant from the controller shaft and from each other. This permits it to be mounted in any one of four positions, 90 deg. apart, so as to allow the placing of the controller in the most convenient position and still to provide easy operation from front, back or either side. In addition, this enables the movement of the handle in many installations to be in the same direction as and to be used to indicate the movement of the hoist, crane or other device controlled.

CONTACTORS ARE ACTUATED BY SPRINGS

These controllers will operate satisfactorily when mounted in any position, as the contactors are spring-actuated and their operation is not affected by gravity. Each controller embodies all such desirable features as conduit wiring, inclosed current-carrying parts, protection against the controller being locked in running position, and prevention of accidental starting or reversal.

This type of controller is supplied both with and without dynamic braking. Controllers for use with crane hoists regulate the speed of the motor while lowering by dynamic or regenerative effect. They are so designed that if there is not sufficient weight on the hook or cage to revolve the drums, the motor will assist in the lowering. The speed of the motor is always under the accurate control of the operator, both when hoisting and lowering, regardless of the load.

As a motor at rest has no counter electromotive force, only the resistance of the motor remains to limit the current that will flow when the motor is connected to the line. In order that the starting current may not reach a value that would damage the machine, on starting resistance is placed in series with the motor. As the machine comes up to speed and a counter electromotive force is generated the series resistance is cut out. Small motors and "self-starting" motors do not require a starting resistance, as they come up to speed quickly and their windings are of sufficiently high resistance to limit to a safe value the starting current, which flows for a short time only.



DRUM-CONTACTOR CONTROLLER

Final contact is made with a slight wiping motion which insures clean surfaces and maximum current-carrying capacity.



Discussion by Readers

Edited by
James T. Beard

Was the Mining Law Violated?

Was the use of open lights, in five rooms turned off the return side of a pair of headings generating gas at the face, a violation of Sec. 3, Art. 10 of the Bituminous Mine Law of Pennsylvania?

MUCH interest has been aroused in the discussion of this question, which was asked by a Pennsylvania fireboss, *Coal Age*, July 15, p. 136, who is anxious to learn the correct interpretation of a section of the bituminous law that prohibits the use of open lights "in the return air current of any portion of a mine that is ventilated by the same continuous air current that ventilates any other portion of said mine in which locked safety lamps are used," and then adds, "The provisions of this section shall not apply to any mine wherein explosive gas is generated only at the face of active entries." (Art. 10, Sec. 3.)

In discussing this question, some have assumed that the gas generated at the faces of the two headings shown in his sketch (p. 136) diffused rapidly, so that the use of open lights in any places on the return not generating gas themselves was not dangerous. The question does not state or involve the amount of gas generated, but only specifies that there was enough to necessitate the use of locked safety lamps at the face of each heading.

Of course, it is possible that the amount of gas generated at the faces of the two headings required the use of locked safety lamps at those points, but its rapid diffusion in the air current made it impossible to detect a flame cap on the return air passing the faces of the five rooms where open lights were in use.

However, it seems to me that it was in the minds of the legislators who enacted this law, that the use of open lights was dangerous on the air returning from any section where the use of locked safety lamps was required. It is my belief that any miners working on the return of such an air current would be compelled by the law to use locked safety lamps regardless of whether or not the lamp showed a cap in their places.

OPEN LIGHTS NOT ALLOWABLE UNDER ANY CONDITIONS

In his letter, *Coal Age*, Aug. 19, p. 401, William Dickinson, Sr., states "Under no condition would I permit open lights to be used on the return air coming from such places. The fact that locked safety lamps are required to be used where the gas is generating shows that those places are making considerable gas."

I quite agree with Mr. Dickinson in this regard. If in charge of that mine I would ask that the owner or operator install electric cap lamps for use in such places. Indeed, my opinion is that our laws should be revised so as to require the universal use of approved electric miners' lamps and wholly do away with the use of open lights in mines, except where the return air contains less than one per cent of gas.

An instance comes to my mind where 90 miners were working with open lights in a mine that was ventilated by a single continuous air current. In one section of that mine, the state deputy mine inspector had ordered the use of locked safety lamps. Ten miners were working in the section where the inspector had ordered the men to use only locked safety lamps, while 60 more miners were using open lights on the return air coming from that section.

RAPID DIFFUSION OF GAS NO SECURITY

It is true the gas diffused rapidly and showed no cap where the 60 men were working, and the same can probably be said of the five rooms mentioned in this case. As the men continued to work in those rooms with open lights it might be assumed that the diffusion of the gas generated in the headings was such as to make the return current safe for open lights. But, who could tell at what moment there might be an increased flow of gas that would make the return current explosive.

In answer to the question, "Did the foreman violate the mining law?" I am compelled to admit, in justice to him, that he could not be held for any violation of the law as it reads. From a practical standpoint, however, I want to say he took long chances. Away then with such uncertain laws and let us have a safe amendment that will be specific in its requirements, regardless of whether a mine is gaseous or non-gaseous.

Farr, Col.

ROBERT A. MARSHALL.

When in Doubt, Play Safe

Common sense guided by experience are often needed to make the work of the miner safe, under the many varying conditions with which he is surrounded.

FOLLOWING up the discussion on the question as to whether it is safe to open lights on the return air coming from a place generating gas in quantities sufficient to compel the use of safety lamps has reminded me of an old saying which runs something like this, "When in doubt take the safe road," and I would say: *When in doubt, play safe.*

Attention has been drawn to that section of the Bituminous Mine Law of Pennsylvania relating to the use of open lights, on reading which one is forced to conclude that the law is very indefinite in respect to what is required when the gas is generated "only at the face of active entries." There seems to be much variance of opinions in that regard, judging from what has been said in this discussion.

It is my opinion that experience and common sense should tell us that safety lamps must be used exclusively, on the return side of any place or section of a mine generating gas in quantities compelling the use of safety lamps where the gas is coming. No doubt the miners would prefer to work with open lights, and

many would take chances if permitted to do so; but the only safe way is to use the same precaution, on the return of a current, that the men are required to use where the gas is being generated.

Every mine official from the president down should preach safety and practice safety if accidents are to be avoided. I believe that the contract system of mining coal offers many inducements to men to take chances, most miners being desirous to continue loading in order to increase their earnings. We mine officials have a great trust and the fact that we are watching over somebody's husband, father, son or brother, should urge us to do our utmost to keep them safe. W. J. LYKE.

Midway, Pa.

Heroic Courage or Foolhardy Daring in Rescue Work, Which?

A spectacular display of courage, in mine-rescue work, generally fails to reveal cool-headed practical judgment on the part of the would be rescuer. Instead, it characterizes him as foolhardy and reckless.

THERE is just a suggestion of sarcasm in the account given in *Coal Age*, Sept. 9, p. 552, of the attempt at rescue made by men of a Bureau of Mines Rescue Crew, at the recent explosion that occurred in the Union Collieries Co.'s mine, at Renton, Pa., a short time since. Reading the account reminds me very much of the old saying, "Don't do as I do, but do as I tell you."

The account states that when the rescue team arrived at the mines, they found that a so-called bucket had been rigged on a $\frac{3}{4}$ -in. wire rope, for the purpose of lowering three men to the bottom of the shaft, which was 509 ft. deep. The newly arrived rescue men decided that the affair was entirely unsafe to lower three men, and two of their own number were selected.

Then, with what would seem to be heroic courage, one of the two men selected, on further examination said, "This bucket will not hold two. I will go down first alone." From the account given I am led to conclude that had one of the ordinary miners attempted the same thing, he would doubtless have been pronounced "a fool."

THE PRICE-PANCOAST DISASTER RECALLED

Only a short time ago a valued member of the Bureau of Mines lost his life when exploring the Price Pancoast mine, at Scranton, Pa., on the occasion when a fire at the shaft bottom had trapped and smothered some seventy or more men. The rescuer assayed to do what his own cool judgment should have prompted him was a doubtful venture.

My attention was attracted to a statement in the article to which I have referred, and which I will say here is made by a man who has had a long experience in mines. He said, "While I am usually willing to go anywhere anyone else will go in a mine, after I looked at the bucket and the condition of the air shaft, I did not insist on being one of those to go down. I hoped I would not be selected for the first sacrifice."

No doubt the man who offered himself for the first trip was aware of the risk he was taking, as his examination of the bucket led him to conclude it was not safe for even two men to attempt to descend. One might think that he was either looking for notoriety or that he valued his life less than most men.

My own experience in rescue work tells me that the dangers incident to the undertaking are many, and no

one need to take any unnecessary risk in order to display his courage and heroism. Whether in sarcasm or in truth, we may not say, but another observer of the same scene is quoted as saying, "I have never witnessed a finer example of courage or a more stirring sight."

There are two kinds of courage—one that is bold and reckless in its disregard of danger, and another that is characterized by a cool, judicious self-control. The courage that is not dominated by self-control and good judgment will generally fail to accomplish what is desired. If we want to succeed in a dangerous undertaking ambition must give place to sound practical judgment.

No one will question for a moment the sincerity of the efforts put forth by members of Bureau of Mines Rescue Teams but it cannot be denied that they are often handicapped by their unfamiliarity with the mines they enter, and by their overwhelming ambition and desire to accomplish, when a cooler judgment would prescribe caution.

It is said that the man landed safely at the bottom of the shaft, after a harrowing experience in the twirling bucket. But the work of restoring ventilation that he is said to have accomplished successfully must have been light indeed, perhaps merely the closing of a door or hanging of a canvas.

Let me say in closing, that it is my opinion the rescue work in a mine should be in charge of the mine foreman or superintendent, who is familiar with the mine and the conditions that exist underground, rather than to be turned over to a team of rescuers from the outside, who lack the same acquaintance with the mine.

Plains, Pa.

RICHARD BOWEN.

Taking Pleasure in One's Work Insures Success in Its Performance

Skill and practical experience are not the sole characteristics of the successful miner. The man who takes pleasure and has an ambition to work is certain to succeed if he is fortunate enough to possess practical skill needed by every worker.

HAVING read the article entitled "What Constitutes a Skilled Practical Miner?" *Coal Age*, Sept. 2, p. 496, I want to give my idea of what seems to me to be the chief essential characteristic of the more successful class of miners.

Close observation leads me to classify all labor as of three kinds; namely, unskilled labor, practical labor, and practical skilled labor. There are plenty of workers belonging to the first of these three classes, a somewhat lesser number in the second class and, I regret to say, very few in the third class.

A practical skilled miner will earn a good day's wage in any place that the mine foreman may give him. Because of his skill and practical experience he is often required to perform the most dangerous work in the mine and, at the same time, he is able to earn more money. But he has another characteristic—he never complains, but goes to his task with pleasure.

Contrast this skilled worker with the practical man who has not the same skill to perform. Almost without exception he is a fault-finder and grumbler. He fails to see why he is not given the same kind of work as the skilled miner, believing that he has the same practical experience as the other fellow. It is well for him that the foreman recognizes his lack of skill and refuses to give him the same difficult work.

In order to realize the difference between men of these two classes, one should observe closely the work performed by different miners on the same gangway in a mine. He will find that the unskilled miner, however practical he may be, is prone to chase the foreman or his assistant about the mine, keeping always on their heels with a complaint of something that is wrong in his place.

Much wrong is being done to a large class of foreigners employed in the mine. Too often, these people are largely controlled by trouble makers who have gained their confidence. They are men who belong to the second class of workers just described. They are too lazy to work themselves and are a hindrance to the poor foreigner who has the ambition and knowledge gained by practical experience but little skill. Training will make these foreigners good workers.

TYPE OF MEN IN DEMAND EVERYWHERE

No one will deny that industries throughout the country are looking for men that take pleasure in working and have the practical experience and skill necessary for its successful performance. Without exception, such men have a high ambition, which gives them strength and energy. They are seldom tired and do not come late to work and quit before the time.

In the mine, the skilled, practical miner is not troubled because his train of cars is not on hand the moment he is ready to load. Instead of grumbling, he goes to work with a will and loosens enough coal to fill all the cars that may be given him a little later. On the other hand, the grumbler sits idly around waiting for cars and when they come it may be he will not be able to fill the cars set in for him.

I will close by saying that men who are willing, energetic and ambitious and who take pleasure in their work have a far better opportunity to earn money than the man who lacks these qualities, in spite of the practical experience that these latter may possess. I am speaking now from my own experience as a worker, which has been gained through the daily performance of my several tasks.

JACOB SKOFF.

Fern Glen, Pa.

Unsafe Practices Among Miners

No one knows better than the mine foreman the many unsafe practices common among miners. How best to persuade his men from following such practices is one of the hardest problems a good foreman has to solve.

SPEAKING, not long ago, of the necessity of tamping a dynamite charge, I remarked that the drillings of the holes made up in small cartridges served well for that purpose. A little later, I was surprised to see that a writer, from McKeesport, took exception to this statement supposing that it had reference to drilling coal.

It would seem hardly necessary to state that the tamping of a charge of dynamite implies rock blasting. Certainly, no practical miner would use a charge of dynamite for blasting coal. The drillings, in this case, were rock drillings, and no one could object to the use of such material for tamping.

If I remember rightly, the same correspondent said that it seems strange to him that the mine officials in charge would permit of frozen dynamite being taken

into the mine. In this regard, I want to say that I formerly worked in a place that required the use of a large amount of dynamite, which would be frozen after it was taken into the mine. In that instance, we were furnished with a car of manure from the mule barn. This was kept at a safe distance from the working face and used to protect the dynamite and thaw out any cartridges that might be frozen.

Another statement made by the same writer was to the effect that mine foremen and superintendents often shut their eyes to practices they know to be dangerous. In all my experience, I have never found anyone who feels worse than the mine foreman when a man is injured in the mine; and it is hard to believe that many of them will close their eyes to practices they know to be unsafe. A conscientious foreman will study hard to find the best way to induce a man to quit a bad practice.

One instance that I recall in my own experience will serve to illustrate how a miner can often be won over by reason, when he will not respond to harsh dictation. A fireboss making his rounds discovered a bad piece of roof in a man's place. He marked the stone in the usual manner and notified the miner to set a post and make it safe before proceeding to do other work.

After making out his report, the fireboss went directly to the place and found the miner at work loading a car, not having set the post as he had been instructed. Calling the man out the fireboss talked with him in a kindly way, telling him of the danger to which he was exposed. The man then returned and, in fifteen minutes by the fireboss's watch, had the post set and his place made safe. Since that time, there is not to be found a more careful man in the mine.

THE ROAD TO SAFETY PAVED WITH "DON'TS"

In closing, allow me to add a few "Don'ts," by way of caution to miners who are heedless of little things pertaining to their own safety. The disregard of trifles has cost many a miner his life and injured others. Giving heed to the following may avert many an unforeseen accident:

- Don't attempt to drill a hole with bits that are worn too small to allow the cartridge to be pushed easily into the hole.
- Don't fail to keep detonators, at all times, separate from other explosives until ready for use.
- Don't fail to keep powder or other explosives in a wooden or metallic box, at a safe distance from the shaft and working face.
- Don't fail to comply with the requirements of the mining law regarding lights when making up a charge.
- Don't use a nail or spike when inserting a cap in a stick of dynamite.
- Don't attempt to crimp a cap on the end of a fuse by biting the cap with your teeth.
- Don't use two kinds of powder in the same hole, as for example, black powder and dynamite.
- Don't attempt to tamp a charge with an iron or steel bar, but use a wooden tamping bar.
- Don't fail to tamp the hole clean to its mouth with some fine incombustible dust or clay.
- Don't shorten a fuse or squib, or do anything to hasten the blast. It is prohibited by law.
- Don't connect the lead wires of your battery to those used by another person. Use your own battery and never connect it with the wires until the last thing before firing.
- Don't attempt to ascertain the cause of a misfire at the time, but leave that for another day.
- Don't fire a shot until you have given sufficient warning and received response from the men working in that vicinity.
- Don't fire two holes at the same time, under any condition, except when using an electric-firing battery.
- Don't return to the face after firing a shot, in order to see its results, but go home. In case of a misfire be sure to notify the person in charge of the district.
- Don't attempt to drill or pick out a misfire, but drill a new hole at a safe distance from the dead charge.

Speaking of "Safety-First" meetings, Richard Bowen has suggested the use of moving pictures to impress our miners with the dangers to which they are exposed and the precautions they should take to avoid them. I agree with him that this would be a fine thing.

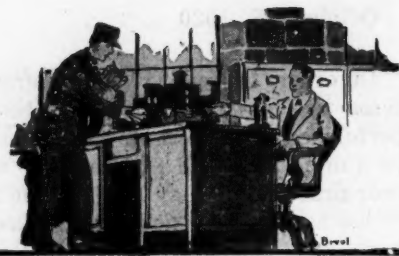
Pittston, Pa.

BENJAMIN DEEBLE.



Inquiries of General Interest

Answered by
James T. Beard



Sinking Shaft Through Quicksand

A system of alternating widths of planking used for curbing a shaft when sinking through quicksand is an effective means of checking and, to a considerable extent controlling the inflow of water and sand.

PLEASE inform me of the most feasible way of sinking a shaft to a depth of 275 ft., passing through 65 ft. of quicksand at some depth below the surface?

Brazil, Ind.

OPERATOR.

Much will depend on the quantity of water present, the mobility of the sand and its depth below the surface. When these factors are such as not to cause an extraordinary pressure and a serious inrush of water and sand that would render the work of sinking both uncertain and dangerous, the expedient has often proved successful of using alternate widths of planking laid flatways as illustrated at *B* in the accompanying figure, which shows a section of shaft curbing passing through a bed of quicksand.



SECTION
THROUGH
SHAFT
CURBING

As appears in the figure, the use of alternate layers of plank, say 8 and 10 in., or 10 and 12 in. wide, leaves a corrugated surface at the back of the curbing, which tends to choke the downward flow of water and sand. If this flow is not blocked in this manner the water draining into the shaft will gradually eat away the ground back of the timbers and cause a cave and inrush of water and sand that may fill the shaft to a considerable depth, flooding the pump and greatly impeding the work.

Where the depth and thickness of the sand bed is considerable, as may be assumed in this case, it will often be necessary to insert temporary cross-buntons extending under the curbing and tie these to heavy beams laid across the top of the shaft. These cross-buntons must be put in, in sections, say each 8 or 10 ft. in depth. It will be readily understood that the purpose of this construction is to hang the curbing from the surface, section by section, until the hardpan is reached below the sandbed and a good foundation can be had to support the curbing, which sustains the pressure and weight of the shifting sand and is in danger of being torn apart.

Experience is required to sink a shaft through a thick bed of quicksand containing much water and lying at some depth below the surface. We have known of instances where five and six attempts, by good sinkers, have met with failure and success came finally only by the use of expensive equipment, which included the employment of a heavy wrought-iron shoe at the bottom of the excavation.

Another method frequently used is that known as the "Freezing process," in which the watery strata are first

frozen, more or less completely, to render the sand less fluid, forming a protecting wall 2 or 3 ft. thick all around the proposed excavation. The freezing is accomplished by drilling holes, a foot or so apart, all around the shaft, and circulating a freezing mixture through pipes dropped into the holes. This is done just in advance of the work of excavation.

By another method, the quicksand when reached is solidified by forcing into it a grouting of good hydraulic cement, through flank holes bored a few feet into the side- and end-walls of the shaft. The setting of the cement forms an effective protection while sinking. In all cases it will be economy to employ competent sinkers who have had experience in such work.

Railroads Delivering Coal at Tidewater

ALLOW me to ask for some information regarding the delivery of coal at tidewater. Can you give the names of the railroads that have coal piers on the eastern seaboard north of Hampton Roads?

Philadelphia, Pa.

DEALER.

Assuming that this inquiry refers to the delivery of bituminous coal, the following railroads can be said to originate and deliver coal at tidewater terminals in the region named:

Pennsylvania R.R.; Baltimore and Ohio R.R.; Philadelphia and Reading R.R.; Western Maryland R.R.; and the Central Railroad of New Jersey.

In addition to the coal originating on the roads just named, the following roads originate coal that reaches the ports of New York, Philadelphia and Baltimore:

New York Central; Buffalo, Rochester and Pittsburgh; Pittsburgh and Lake Erie; and Monongahela Railroads, besides a number of short-line connections of these roads.

Distinction Between Squeeze and Creep

KINDLY explain the difference between a squeeze and a creep as applied to coal mining.

Morgantown, W. Va.

STUDENT.

Briefly explained the weighting of the roof when a squeeze takes place crushes the pillars and makes the coal more difficult and dangerous to mine. Timbers are broken and roof falls are frequent.

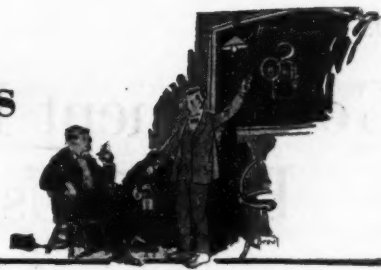
A creep is quite generally understood as referring to a destructive heaving of the bottom or floor of the mine, resulting from insufficient pillar support under a moderately strong roof and coal and a soft bottom. A squeeze results from the same cause acting to crush the coal by reason of a hard unyielding bottom. The roof, in a squeeze, may be either hard or frail.

The distinguishing characteristic of a creep is the destructive heaving of the bottom; while the squeeze is characterized by the crushing of the coal and breaking of the roof. In both instances timbers are liable to be broken.



Examination Questions

Answered by
James T. Beard



Miscellaneous Questions

QUESTION—(a) *What three conditions are the prime factors in determining the size of slopes?* (b) *Where the roof of a slope is tender, how would you timber it?* (c) *Should the timber be round or square and why?*

ANSWER—(a) The size of a slope opening will depend on the following: 1. Size of the mine cars. 2. Number of tracks or kind of haulage employed. 3. Requirements in regard to drainage and ventilation.

(b) Where the roof is tender lagging should be used to support it and prevent the fall of loose pieces of slate or rock between the timber sets. The timbers in a slope should be slightly underset; that is to say the posts should be inclined at a slight angle up the pitch, from the normal.

(c) The choice of round or square timber for slopes is largely a matter of preference. Some will prefer square timbers as providing a better means of supporting the pipe lines and wire conductors; while others will prefer round timbers as being less expensive to prepare and handle than sawed timber.

QUESTION—*How should a mine be laid out and developed to insure the recovery of the largest percentage of coal?*

ANSWER—First, the main haulage roads and cross-headings should be laid out with respect to economic haulage and drainage, and in a manner that will afford an equal distribution of miners, so as to give every driver a full trip, at regular intervals, in each section of the mine. Second, the rooms should be driven so as to work the coal "face on", or "end on", or at an angle with the cleats and joints of the coal. Due regard must also be had to any slips or fault lines in the roof. Third, the method of working employed must be adapted to the nature of the roof, floor and coal, with a view to avoiding any undue pressure on the pillars.

QUESTION—*What is the most economical way to increase the quantity of air in a coal mine? State fully.*

ANSWER—The cheapest way to increase the volume of air circulating in a mine is to keep the airways free from all obstructions and to see that all breakthroughs and crosscuts are of sufficient size. It is important to conduct the air by the shortest possible course throughout the mine; also to divide the air into two or more splits wherever this can be done to advantage. Observing these points will enable a larger circulation of air under a lower water gage and reduce the power required to produce ventilation in the mine.

QUESTION—*A current of 3,000 cu.ft. per min., air and gas at the highest explosive point of the mixture, is passing in a mine; how much air must be added to dilute this mixture so as to give only a faint cap in a safety lamp?*

ANSWER—Assuming this is a firedamp mixture containing only pure methane (marsh gas) and air, the

percentage of gas present, at the maximum explosive point, is 9.46 per cent; and the volume of gas in a current of 3,000 cu.ft. per min. is $3,000 \times 0.0946 = 283.8$ cu.ft. per min. When using a common unbonneted Davy lamp, burning sperm, lard or cottonseed oil, a good fireboss will be able to detect a faint cap in his lamp if but 2 per cent of gas is present in the air.

Therefore, on this basis, if 283.8 cu.ft. is 2 per cent of the current after the required amount of air has been added, the total volume of air and gas then passing is $283.8 \div 0.02 = 14,190$ cu.ft. per min.; and the volume of air that must be added to have produced this conditions is $14,190 - 3,000 = 11,190$ cu.ft. per min.

QUESTION—*With ordinary good roof and floor can pillars be extracted successfully with mining machines; and, if so, what system would you adopt?*

ANSWER—Assuming a fairly level seam and uniform conditions that favor the use of machines, pillars can be taken out as well or even better by the use of machines than by pick mining. Unless the roof pressure is excessive a good plan to adopt is to drive double rooms that will afford a 60-ft. breast of coal for the machines in driving up the rooms; and leave 60-ft. pillars to be drawn back when the rooms have reached their limit. A track should be carried up along each rib and timbered by setting posts 3 or 4 ft. apart on the gob side, with good cap-pieces over them. When drawing back the pillars, one or two rows of posts should be kept between the face of each pillar and the waste.

Under a heavy roof pressure or where the roof has a tendency to fall, a better plan is to leave two-thirds of the coal to be taken out as pillar coal in the second working. In that case single rooms should be driven, say 20 ft. wide, on 60-ft. centers, leaving 40-ft. pillars. In this plan, the rooms should be started and driven abreast of each other, say six or eight rooms at a time; and the pillars should likewise be drawn back in a uniform breast line, in order to give the best results.

QUESTION—*What percentage of the total volume of air entering a mine at the inlet would you expect to find as measured in the last crosscut of the various splits?*

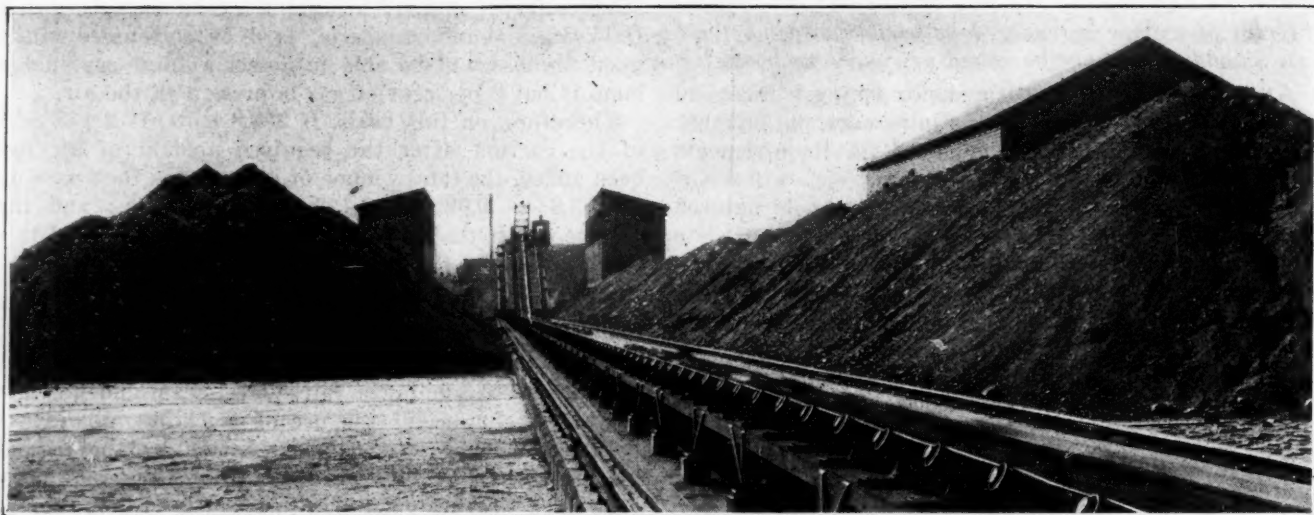
ANSWER—This question cannot be answered intelligently without a familiar knowledge of the mine in question. In a large mine ventilated under a considerable gage pressure, especially if the stoppings, doors and air bridges are not well built, the loss in air volume by leakage may reach 50 per cent or more. On the other hand, in a moderately developed mine having well built stoppings, doors, etc., one may find, say 80 or 90 per cent of the intake air at the last crosscut.

QUESTION—*How would you direct a miner to remove a pillar of coal 8 ft. high, 3 ft. wide and 6 ft. long when the roof is extremely dangerous?*

ANSWER—No attempt should be made to take out such a pillar; it cannot be done with safety and the miner should be given another place to work.

Government Fuel Yard Delivers Coal to 725 Points, Using 275,000 Tons Annually*

Statement for Fiscal Year Shows Total Cost of Fuel Was \$1,904,071, Operating Margin Amounting to \$229,924 — Delivery Was Largely by Truck, at Average Handling Cost of \$1.138 Per Ton



STORAGE PLANT OF GOVERNMENT FUEL YARD, WASHINGTON, D. C.

This view shows the storage floors on both sides of conveyor belt No. 3, which carries the coal to the stacker shown in the center of the picture. The stacker delivers the coal into bins either on the right or left, from which it is drawn directly into motor trucks for delivery to the various government buildings in Washington. A locomotive crane picks the coal up from storage and delivers it on the belt. Nearly 200,000 gross tons of coal were handled in this belt last year

IN PROVIDING for the establishment, maintenance and operation of a Government Fuel Yard the Sundry Civil Bill for the fiscal year 1918 act imposed on the Fuel Yard the responsibility of buying fuel and distributing it to all of the Federal and municipal plants within and contiguous to the District of Columbia with the single exception of the Navy Yard. The dis-

tributing points number approximately 725 and the fuel consumption is about 275,000 tons annually.

During the year ended June 30, 1920, 266,942 gross tons of coal, 689 cords of wood, 1,122.2 bushels of charcoal, and 22.9 tons of coke were handled. All but 73,463 tons was delivered by truck at an average handling cost of \$1.138 per ton. In this cost is embraced the expense of rehandling incident to the reclaiming from storage of 17,562 tons. The total cost of this fuel to the departments was \$1,904,071. The prime or

*Abstract from the report to the Director of the Bureau of Mines on the maintenance and operation of the Government Fuel Yard for the fiscal year 1920, by George S. Pope.

ANALYSIS OF COST OF TRUCK OPERATIONS OCT. 1 TO JUNE 30

SEVEN AND ONE-HALF TON EQUIPMENT

	Gas Gals.	Oil Qts.	Grease Lbs.	Gas	Oil	Grease	Operating Expenses Material	Labor	Tires	Driver Wages	Overhead	Total
Total.....	37,993	7,446	269	\$9,001.01	\$966.11	\$33.33	\$9,619.92	\$3,835.28	\$5,495.83	\$7,293.47	\$16,333.72	\$52,578.67
Average per mile.....	0.498	0.097	0.003	0.118	0.012	0.0004	0.126	0.05	0.072	0.095	0.214	0.689
Average per ton.....	0.418	0.081	0.002	0.099	0.01	0.0003	0.105	0.042	0.06	0.08	0.179	0.578
Average per ton-mile.....				0.0342	0.0036	0.0001	0.0306	0.0145	0.0208	0.0276	0.0619	0.1995

FIVE AND ONE-HALF TON EQUIPMENT

Total.....	39,346	8,452	318	\$9,379.43	\$977.42	\$37.55	\$8,812.95	\$4,669.51	\$2,645.76	\$7,239.46	\$15,630.65	\$49,392.73
Average per mile.....	0.503	0.108	0.004	0.12	0.012	0.0004	0.112	0.059	0.033	0.092	0.200	0.633
Average per ton.....	0.582	0.125	0.004	0.138	0.014	0.0005	0.13	0.069	0.039	0.107	0.231	0.730
Average per ton-mile.....				0.0476	0.0049	0.0001	0.0446	0.0236	0.0134	0.0366	0.0792	0.250

TWO TON EQUIPMENT

Total.....	6,079	602	24	\$1,427.26	\$70.28	\$2.50	\$1,173.90	\$613.19	\$405.72	\$1,841.09	\$3,032.40	\$8,566.34
Average per mile.....	0.328	0.032	0.001	0.077	0.003	0.0001	0.063	0.033	0.021	0.099	0.163	0.462
Average per ton.....	0.799	0.079	0.003	0.187	0.009	0.0003	0.154	0.08	0.053	0.242	0.398	1.126
Average per ton-mile.....				0.268	0.0132	0.0004	0.2205	0.115	0.076	0.3459	0.5697	1.6096

ONE TON EQUIPMENT

Total.....	465	108	1	\$127.82	\$14.68	\$0.09	\$87.00	\$83.09	\$15.06	\$149.66	\$714.25	\$1,290.65
Average per mile.....	0.393	0.091	0.0008	0.108	0.012	0.00007	0.073	0.07	0.012	0.126	0.688	1.091
Average per ton.....	1.473	0.342	0.003	0.405	0.046	0.0002	0.275	0.263	0.047	0.474	2.577	4.09
Average per ton-mile.....				0.158	0.0182	0.0001	0.108	0.103	0.0187	0.1859	1.0106	1.6039

	Trucks	Miles	Trips	Tons	Ton-Miles	Avail. Not Used	Days Operated	Laid Up for Repairs
7½-ton equipment.....	13	76,221	13,140	90,562.62	263,476.223	425	1,801½	717½
5½-ton equipment.....	15	77,999	13,321	67,574.16	197,316.5472	646	1,858	854
2-ton equipment.....	4	18,508	3,415	7,602.86	5,322.002	245	518	165
1-ton equipment.....	2	1,182	231	315.555	804.665	141½	73½	40

basic cost to the fuel yard was \$1,674,147, leaving an operating margin of \$229,924.

In the accompanying statement of costs, the heading "Direct from Car to Truck" indicates the coal that was unloaded from the car onto the conveyor belts, conveyed direct to bins, and from there loaded into the trucks. Coal "Reclaimed from Storage," on the other hand, was coal that had previously been conveyed from the unloading hopper to some point into the yard and placed in storage, from which point it was reclaimed and distributed by trucks. "Direct Delivery" represents the coal or fuel that is consigned directly to consumers having railroad sidings or wharves. Under the head "Selling Price" is recorded the money value of the coal delivered to the Federal and municipal establishments. The average selling price per ton was, of course, averaged over the year. "Prime Cost" is the fuel cost plus transportation charges, f.o.b. Washington. The operating margin represents the difference between the selling price and the f.o.b. Washington price; it is, in fact, the handling charge.

The fluctuations in the per ton averages of the gross profits are due to two things: (1) Variation in the

prime cost of coal, especially diverted coal, which was taken up at the time of delivery at an estimated price. But the actual cost was not and could not be determined until several weeks and sometimes months later. (2) A given type of coal may have been delivered within the period of one price only; for example, the overhead charge of buckwheat coal is 8c., which means that none of this coal was delivered in any month when more than 8c. was charged.

Under the law the Government Fuel Yard is required to charge the departments for the cost of its maintenance. The prices, therefore, are varied from time to time to meet fluctuations in the cost of the service rendered and in prime cost of the fuel.

The operating expenses are likewise summarized and distributed over the respective branches of the work. The average cost per ton for the yard was 23.6c.; for the garage 65c.; for overhead 9.4c.; and for leasehold improvements and depreciation of equipment other than motor equipment 15.8c. In making allowance for depreciation of equipment no cost is taken up for motor and other equipment at the yard which was purchased from an appropriation providing specifically for the

OPERATION STATEMENT, FISCAL YEAR 1920

YARD DELIVERIES

Direct from Car to Truck

	Gross Tons	Selling Price		Prime Cost		Operating Margin	
		Total	Per Ton	Total	Per Ton	Total	Per Ton
Bituminous Coal:							
Pennsylvania.....	90,148.49	\$621,065.90	\$6.89	\$525,336.25	\$5.83	\$95,729.65	\$1.06
New River.....	60,841.85	418,861.61	6.88	346,871.48	5.70	71,990.13	1.18
Jerome.....	1,053.97	6,248.54	5.93	5,091.39	4.83	1,157.15	1.10
Splint.....	16.97	117.24	6.91	97.30	5.73	19.94	1.18
Anthracite:							
Furnace.....	7,700.61	75,022.94	9.74	66,758.85	8.67	8,264.09	1.07
Egg.....	6,785.81	68,321.24	10.06	60,914.84	8.97	7,406.40	1.09
W. A. Stove.....	6,639.67	68,531.02	10.32	61,276.66	9.23	7,254.36	1.09
R. A. Stove.....	240.33	2,531.50	10.53	2,278.01	9.48	253.49	1.05
Chestnut.....	361.60	3,824.28	10.57	3,363.47	9.30	460.81	1.27
Pea.....	2,129.34	18,709.71	8.78	16,390.81	7.69	2,318.90	1.09
Totals.....	175,916.64	\$1,283,233.98		\$1,088,379.06		\$194,854.92	\$1.11

Reclaimed from Storage

Bituminous Coal:							
Pennsylvania.....	7,470.60	\$51,877.84	\$6.94	\$42,432.53	\$5.68	\$9,445.31	\$1.26
River.....	6,720.09	46,983.65	6.99	37,916.28	5.64	9,067.37	1.35
Jerome.....	93.47	636.32	6.80	461.41	4.93	174.91	1.87
Splint.....	69.56	490.79	7.05	441.65	6.34	49.14	.71
Anthracite:							
Furnace.....	401.05	3,994.71	9.96	3,453.54	8.61	541.17	1.35
Egg.....	650.37	6,690.73	10.28	5,825.48	8.95	865.25	1.33
W. A. Stove.....	400.33	4,256.32	10.63	3,701.40	9.24	554.92	1.39
R. A. Stove.....	160.60	1,733.65	10.79	1,526.49	9.50	207.16	1.29
Chestnut.....	265.02	2,827.59	10.67	2,464.68	9.30	362.91	1.37
Pea.....	937.16	8,502.71	9.07	7,316.04	7.80	1,186.67	1.27
Buckwheat.....	387.33	2,639.07	6.81	2,134.19	5.51	504.88	1.03
Coke.....	6.59	79.70	12.09	63.92	9.70	15.78	2.39
Totals.....	17,562.17	\$130,713.08		\$107,737.61		\$22,975.47	\$1.31

DIRECT DELIVERIES

Bituminous Coal:							
Pennsylvania.....	61,743.03	\$364,604.80	\$5.90	\$358,087.83	\$5.80	\$6,516.97	\$0.10
New River.....	3,123.19	18,478.63	5.91	18,153.61	5.81	325.02	.10
Jerome.....	1,018.70	5,044.62	4.95	4,922.38	4.83	122.24	.12
Star.....	1,966.65	10,855.91	5.52	10,619.92	5.40	235.99	.12
Gas.....	1,432.19	7,852.04	5.48	7,679.43	5.36	172.61	.12
Anthracite:							
Egg.....	1,587.83	14,388.56	9.06	14,197.95	8.94	190.61	.12
W. A. Stove.....	3,462.73	32,678.12	9.44	32,205.89	9.30	472.23	.14
Nut.....	250.78	2,380.52	9.49	2,351.65	9.37	28.87	.12
Pea.....	135.25	1,112.88	8.23	1,102.17	8.15	10.71	.08
Buckwheat.....	210.60	1,322.42	6.28	1,305.76	6.20	16.66	.08
Rice.....	532.63	2,646.29	4.96	2,582.54	4.84	63.75	.12
Totals.....	73,463.58	\$461,364.79		\$453,209.13		\$8,155.66	\$0.11

SUMMARY

Yard sales.....	175,916.64	\$1,283,233.98		\$1,088,379.06		\$194,854.92	
Storage sales.....	17,562.17	130,713.08		107,737.61		22,975.47	
Direct sales.....	73,463.58	461,364.79		453,209.13		8,155.66	
Wood.....	2,067.60	9,545.81		7,456.63		2,089.18	
Charcoal (Bu.).....	1,122.20	627.01		596.60		30.41	
Storage.....	45,350.50	18,341.95		16,571.17		1,770.78	
Coke.....	22.90	244.89		196.94		47.95	
Totals.....	269,032.89	\$1,904,071.51		\$1,674,147.14		\$229,924.37	

OPERATING EXPENSES

Yard—195,569.31 tons.....	\$46,255.09 (0.236 per ton)
Garage—195,569.31 tons.....	127,239.01 (0.65 per ton)
Overhead—269,032.89 tons.....	25,440.69 (0.094 per ton)
Leasehold improvements and depreciation of equipment.....	30,988.78 (0.158 per ton)
	\$229,924.37 (1.138 per ton)

establishment of the Fuel Yard, but equipment purchased from the appropriation entitled "Maintenance and Operation of the Fuel Yard" is depreciated. Depreciating equipment purchased from the original appropriation would have the effect of increasing the second named appropriation, which is in its operation a revolving fund, and would be unlawful. However, equipment purchased from the maintenance and operation fund is properly and legally subject to depreciation in order to avoid depleting the amount originally appropriated. It may be said further that such items as interest on investment, taxes and insurance are not taken up as an expense, as they cannot be legally charged. The leasehold improvements are repairs and improvements to buildings and grounds.

It may be of interest to further analyze the expense

of the yard and garage operations. A detailed analysis can be given for only a nine-months' period (Oct. 1-June 30) since a change in the accounting system to provide such detailed information was not put into effect until Oct. 1. The yard operating cost may be analyzed as follows:

Stacker and conveyor.....	\$4,061.75
Unloading cars (3009).....	6,309.05
Reclaiming coal.....	3,306.75
Loading and weighing trucks.....	2,096.13
Overhead.....	19,720.29

The "Overhead" embraces such charges as rental (\$9,250 per annum), power and light current (\$3,245), head, and salaries of supervising employees and witchman.

The garage cost is likewise summarized for the period of nine months in the accompanying table.

Washington Men Don't Want to Strike

ANNOUNCEMENT that the coal miners of western Washington had voted against a strike to enforce a retroactive wage increase for daymen and boys was made at headquarters of District No. 10 of the United Mine Workers in Seattle Oct. 1. The referendum ballot was ordered ten days previous when the strike call was temporarily suspended. District President Robert D. Harlin has stated that this referendum resulted in a majority of 741 against a walkout.

Twenty-eight local unions voted, casting a total of 2,587 ballots, 923 of which were for and 1,664 against a strike. The vote was commented upon as remarkably heavy, the district officers estimating that not more than 3,000 workers were involved in the controversy. The referendum vote automatically cancels the strike order previously issued and the district officers have sent out notices to all local unions informing them of the verdict of the referendum vote.

The controversy as to back pay arose some time ago when a coal operators' committee met the district officials of the mine workers and agreed to grant an increase of \$1.50 a day to daymen and 82 cents to boys, equalizing the Washington wage scale with the scale in other state districts. It refused, however, to make the increase retroactive to Aug. 16, as the miners' committee had demanded. A strike was called for Sept. 23, but a call for a referendum vote suspended the strike call. The strike order went only to the mine workers employed in the mines producing coal for the market, the railroad mines of eastern Washington having agreed to make the wage increase retroactive to Aug. 16.

Relocation of Cars Proceeds Satisfactorily

UNDER orders issued by the Car Service Division of the American Railway Association and by the Interstate Commerce Commission, 106,247 empty box cars have been forwarded from Eastern and Southern to Western railroads from May 25 to Sept. 15, and during the last three weeks additional orders have been placed by the car service division for the movement of empty box cars to Western roads at the rate of 1,185 a day for thirty days.

In addition to the cars sent to Western roads from roads in the East and South, a considerable number of cars has been relocated between roads in Western districts. The grand total of box cars forwarded empty under relocation orders from one road to another, in the interest of equitable car distribution, from May 25 to Sept. 15, has been 185,288, of which 165,925 have been reported as received by the destination roads, and the orders now in effect provide for the total movement of 60,600 additional box cars, of which 35,550 are for Western roads. Similarly, about 150,000 open-top cars for coal loading have been relocated in the interests of increased coal production.

Relocation, important in the program of providing more service to the public by promoting a better condition of repairs generally, has been particularly difficult because of the great demand for cars in all sections. The relocation orders, however, represent a method of dealing with unusual

conditions, and now that an approach has been made to giving each district a number of cars equal approximately to its ownership, instructions have been issued for the establishment of a plan of equilization in interchange between railroads so that each road in general will receive from its connections as many cars as it delivers to them, loaded or empty. This plan should operate to enable each district to maintain a supply of cars approximating its ownership. To meet the necessities of local situations, however, some relocation orders will still be necessary, and to accommodate the demand for cars for the grain movement, orders now in effect require Eastern roads to deliver to Western lines at Chicago, Peoria and St. Louis a designated number of cars per day in excess of the number required for equalization. These cars are being distributed between the roads in the West in such manner as to give quick relief to the roads whose supply is below the average and particularly to lines that have been losing cars in the last month by reason of heavy eastbound shipments.

Coal Loadings Decrease

REPORTS of revenue freight car loading compiled by the car service division of the American Railway Association indicate that the volume of freight traffic originated by the railroads during the week ended Oct. 2 was greater than that for the corresponding weeks of 1919 and 1918 but less than for the two preceding weeks of this year. During the week 975,946 cars of commercial freight were loaded on the class 1 railroads, as compared with 957,596 in 1919 and 971,895 in 1918. Increases as compared with 1919 are shown in the Allegheny, Northwestern, Central Western and Southwestern districts, but decreases were reported for the Eastern, Southern and Pocahontas districts. There were increases in the loading of coke, forest products and ore, but decreases in grain and grain products, livestock, coal, merchandise and miscellaneous.

The deferred car requisitions (car shortage) for the week ended Oct. 1 show a further reduction to 82,360, as compared with 89,947 for the previous week.

Smokeless Operators Arrange to End Shortage in Canal Zone

TO MEET an emergency in the Canal Zone, the Smokeless Coal Operators' Association has agreed to arrange to send 55,000 tons of coal monthly to the Panama Canal. Stocks on the Isthmus were recently reduced to ten days' supply. There is some objection to filling the entire requirements of the Panama Canal with smokeless coal because of the proclivity of foreign ships to delay coaling at other points so as to obtain high-grade fuel on the Isthmus.

The Smokeless Association also has agreed to see that coal is furnished at all Federal buildings in Ohio, Indiana and Illinois. Since July 29 smokeless operators have furnished 600 cars of emergency coal in Virginia. This movement has been handled in co-operation with the committee appointed by the Governor of Virginia.

Bituminous Coal Exported Overseas in 1920

IN DISCUSSING coal exports it is important to distinguish between the land export trade to Canada and Mexico, which is permanent and proceeding normally this year, and those exports which move by sea. This sea-borne trade is practically confined to bituminous coal. Before the European War it amounted to 4,000,000 or 4,500,000 net tons a year, the bulk of which went to the West Indies and Central America.

The active foreign demand which developed late last year has so stimulated exports that during the first eight months

of 1920 sea-borne shipments amounted to 12,892,000 tons. This was at the rate of more than 19,000,000 tons a year, or more than twice the 1919 exports and more than four times those of 1914. The outstanding feature of the 1920 export demand has been the remarkable increase in shipments to France, the Scandinavian countries, the Netherlands, Switzerland and Egypt. Shipments to Italy, although larger than those to any other country, have not increased to as marked a degree as have those to the other countries named.

SEA-BORNE EXPORTS OF BITUMINOUS COAL FROM THE UNITED STATES ^a

Country	(Calendar Years—Net Tons.)						1920 To Aug. 31
	1914	1915	1916	1917	1918	1919	
Belgium.....						224	198,000
Denmark.....		2,999		11		99,571	718,000
France.....	53,012	215,811	100,249	51,172	8,098	586,032	1,551,000
Greece.....		82,025	65,495	3,741	3,241	53,894	193,000
Italy.....	869,593	3,283,371	1,943,271	627,903	11,193	1,828,954	1,921,000
Netherlands.....	226	42,800			18,493	808,854	1,497,000
Norway.....		58,830	86,750	24,497		179,024	535,000
Portugal.....	56	22,118	19,425	49,428	5,421	50,599	91,000
Sweden.....		263,345	79,504			283,238	992,000
Spain.....	48,020	223,586	151,988	176,406		20,858	67,000
Switzerland.....				4,546		592,004	584,000
Cuba.....	1,265,548	1,305,976	1,438,263	1,579,865	1,613,312	1,087,967	1,015,000
Argentina.....	156,138	881,403	1,032,605	355,671	200,367	541,396	1,060,000
Brazil.....	267,772	726,089	875,945	767,359	626,191	710,202	631,000
Chile.....	93,941	80,117	259,017	354,340	336,069	104,852	239,000
Uruguay.....	69,946	177,185	171,060	67,411	256,434	218,397	165,000
Egypt.....	82,639	178,436	101,608			42,048	36,000
French Africa.....	159,201	123,306	114,205	95,258	2,405	58,241	177,000
Other countries.....	1,342,426	1,439,876	1,298,919	1,348,144	953,032	783,471	822,000
Totals.....	4,408,518	9,107,273	7,774,314	5,505,752	4,034,256	8,049,826	12,892,000

(a) Compiled from records of Bureau of Foreign and Domestic Commerce. (b) Fiscal year ended June 30, 1914. Other years are calendar years.

N. Y. Board of Estimate Protests Against Exportation of American Coal

PROTEST against the priority orders "issued by the Federal Government, which are depriving New York City of coal" was voiced by the New York Board of Estimate in resolutions adopted by that body on Oct. 22. The board in its resolution sympathized "with the needs of any other section of the country, but maintained that the health and comfort of the residents of New York City should not be destroyed by arbitrary action of governmental authorities."

"We also protest against the continued export of coal to foreign countries and request that the Federal authorities take action that our people here may be supplied with the supreme necessity before coal is shipped to foreign countries" reads the resolution, and the Mayor was requested to take whatever means he deems wise and necessary to see that the residents of New York City are supplied with coal.

LANDLORDS NOT AS HARD UP AS ALLEGED

The investigation of Health Commissioner Copeland into the complaint from those apartment house owners who have been unable to obtain coal has not been as successful as was expected. Many complaints were received, but upon investigation it was found that most landlords were not without coal, as they alleged. Those who were entirely without coal were partly supplied and daily tonnages are being delivered.

The New York Fuel Distribution Committee appointed by Public Service Commissioner Lewis Nixon to take care of the coal situation for the public utility corporations will have a conference soon with George Elliot, secretary of the National Committee on Gas and Electric Service, to determine what can be done to provide a more adequate reserve supply for the local companies for the winter months.

The companies in Greater New York had on hand on Oct. 19, 441,545 tons of bituminous coal as compared with 447,872 tons on Oct. 13, a decrease of 6,327 tons.

Thirty members of the wholesale anthracite trade met at the Whitehall Club, Friday, Oct. 22, at the invitation of Charles S. Allen, secretary of the Wholesale Coal Trade Association of New York, to discuss the present hard-coal situation in the East. W. H. Lewis, of M. A. Hanna & Co., was appointed chairman of a committee to report in

one week upon the advisability of the anthracite wholesalers following the precedent set several months ago by the Wholesale Coal Trade Association in adopting resolutions limiting the resale of coal to two wholesalers and the profit to 10 per cent maximum gross.

Mr. Allen told the anthracite wholesalers of the co-operation the association had given the Department of Justice through Assistant Attorney General William McMurtie Speer. Mr. Allen is of the opinion that as a result of the adopted resolutions and the co-operation profiteering in soft coal is now limited to less than 10 per cent of the wholesalers and is fast being eliminated.

MIDDLE WEST ABLE TO USE MIXTURES

A complaint was registered against the diversion of so much anthracite to the Great Lakes region, and the subsequent delay of shipment to New York, and it was pointed out by one wholesaler that the big cities of the Middle West can better burn bituminous or a mixture of bituminous and anthracite coal for domestic use than can New York.

William McMurtie Speer, Assistant Attorney General, met with a special committee of coal operators at the Vanderbilt Hotel on Friday to inform them of the difficulty the Department of Justice is having in getting sufficient evidence on which to go before a grand jury seeking indictments of grafters in coal. It is understood that prices were not the subject under consideration at this meeting, which was called by Colonel Wentz and attended by him and Mr. Morrow. It is reported that the program for the Cleveland meeting was under discussion and that it does not include the subject of prices.

Steps were taken at a meeting of the Central Federated Union, Friday evening, Oct. 22, in New York City, to retard the export of coal to England. A resolution was passed calling upon President Wilson to place an embargo on all coal exports. Copies were ordered sent to the President and to the American Federation of Labor.

The resolution declares the Government should take over and control all coal mines in the country, and that the Chief Executive should use his war power immediately to see that the people are properly supplied with this necessity of life.

The unions ask that an order be issued which would discontinue the supplying of foreign ships with more coal than is sufficient to carry them to their home ports.

News from the Capital

By Paul Wooton



Assigned Cars for Public Utilities Are in the Balance

IT WILL be remembered that the blanket use of assigned cars for utilities was canceled a few weeks ago and now can be had only if a select committee representing all interests recommends to the Interstate Commerce Commission that an emergency exists. To date not a single application has been certified for assigned cars, it is reported. This shows in unmistakable fashion that the practice was being abused under the former open-handed policy of the Government.

During the first week of the new arrangement the committees passing upon franchised and non-franchised public utilities were able to meet such emergency cases as arose without resort to assigned cars. It was necessary, however, in one case to authorize the Interstate Commerce Commission's agent at Cleveland to release sufficient coal from Lake pools to provide for the daily operation of a Cleveland utility should he be satisfied that coal could not be obtained from other sources sufficient to allow continuance of operation.

Great pressure is being brought to bear to secure the resumption of the use of assigned cars. This does not come alone from public utilities. Some operators, as well, are clamoring for a return to that practice, since it insures better operating conditions at their mines.

The applications for relief from the franchised public utilities are being received by the National Committee on Gas and Electric Service. During the first week that the new public utility order was in effect 7,000 applications for emergency coal were received. In all but a comparatively few cases the proof was lacking that an emergency exists, so that the number of cases were few in which operators were called upon to rush coal to utilities in distress. The active work on this committee is being done by A. G. Gutheim, John Callahan and George W. Elliot. The committee handling the non-franchised public utilities consists of Mr. Gutheim, Mr. Callahan and E. H. DeGroot. Mr. DeGroot succeeds R. E. Quirk in the direction of car service for the Interstate Commerce Commission.

At the National Coal Association the firm belief is expressed that the situation will be met without the use of assigned cars. It is admitted that adverse weather conditions, extremely bad car supply or some other unforeseen situation might interfere with distribution to such an extent that the present direct method of supply might prove inadequate, but under anything like favorable conditions it is believed that the situation will be smoothed out promptly.

In connection with Service Order No. 21 the National Committee on Gas and Electric Service sent out a questionnaire to 10,000 public utilities asking for the following information: Present stock of coal in net tons; daily requirements (period ending March 15, 1921); annual requirements in net tons; tonnage contracted for; number of days required to move coal from mines; percentage of daily requirements shipped during last two weeks; tonnage of coal now in transit; kind of coal (gas or steam); give description of any other fuels used; can you adjust your requirements to use (a) mine run, (b) lump, (c) slack; received by rail or water; name of contractor in each individual contract; period of contract; location of mines; original shipping point; originating railroad; routing to destination.

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Relief from the Lake obligation has been granted on the Louisville & Nashville R.R.; in the gas coal field of Pennsylvania; in certain districts in Ohio and at all wagon and stripping operations. This alone has had a most stimulating effect on the situation.

Contend That Application of Lever Act Ended with the War

ARGUMENTS were heard in the U. S. Supreme Court in several test cases as to the constitutionality of the Lever Food and Fuel-Control Act. Solicitor General Frierson, for the Government, argued to sustain the act on the ground that price regulation of necessities of life was a proper government function for the prosecution of war and that the armistice had not revoked the Government's right to exercise these powers. While admitting that it was debatable whether the act included producers, he argued that it did cover everything that is done in the way of handling or dealing in commodities.

Mr. Frierson referred to coal, saying that a company engaged in mining does not produce coal, but employs capital and labor to remove it from the ground. It thus handles coal as it is found in its natural state. Those who buy and sell it after it is mined deal in it.

Those opposing the law declared it unconstitutional because it was vague in its declaration as to rules of conduct, and further that the act of October, 1919, was an invasion of state rights because the armistice had ended the war.

The Lake and Export Coal Association of West Virginia, in a brief filed as "friend of the court," attacked the law on the ground that it violated the fifth and sixth amendments to the constitution and declared the act of 1919 to be void because there exists no emergency which could sustain the act.

Attorneys opposing the law argued that the Government could not regulate prices of articles in whose sale the Government has no interest from the standpoint of interstate commerce or internal revenue and by which the United States could not be affected to any degree. It was argued that the resumption of powers by the President under the Lever law for resisting the coal strike last year was no evidence of the continuance of the war. No treaty was necessary to terminate the war as it was ended with the armistice. They argued that the law related not only to the greatest coal company in Pennsylvania but also to the corner grocery which deals in fuel by the bushel, and unless it could be sustained as a proper exercise of government power in respect to the smallest of these businesses it could not be sustained at all.

HEARING HAS BEEN had before the U. S. Supreme Court in the case of the United Mine Workers vs. the Coronado Coal Co., which is an appeal from a decision of a lower court which awarded the coal company treble damages for destruction of coal properties during a strike. Henry S. Drinker, Jr., of Philadelphia, appeared for the coal company, arguing that the mine workers' organization was amenable to prosecution under the Anti-Trust Act, while Charles E. Hughes argued in defense of the mine workers, declaring that it was not subject to prosecution thereunder.

Water-Power and Fuel-Power Costs Compared

Conclusion That Water-Power Development Has Nullified Coal as a Power Factor Declared To Be Erroneous

WITH the cost of coal high and the active discussion of water power development there has been a great deal of loose talk regarding the way in which water power would replace fuel power in this country. It seems worth while, therefore, to consider in a simple way a few of the factors that affect this situation.

Fuel-power costs are made up in general of three items: (1) for fuel, (2) for labor and miscellaneous materials, and (3) for capital charges, including interest, depreciation, etc. The fuel costs are about half the total, labor and miscellaneous expense perhaps 15 per cent and capital charges 35 per cent. On the other hand, water-power costs do not include any appreciable item for fuel, and the labor and miscellaneous operating expenses are small, constituting roughly about 10 per cent of the total. The major item is the capital charge, which is perhaps 90 per cent of the total power cost on the average.

If we go back to 1913 or 1915 conditions and take, for example, a situation where fuel power and water power were about on a par, we may summarize these facts as follows:

DISTRIBUTION OF POWER COSTS

	Fuel-Power Costs Per Cent	Water-Power Costs Per Cent
Fuel.....	50	
Labor and Miscellaneous Items.....	15	10
Capital Charges.....	35	90
Totals.....	100	100

These figures may be brought up to 1920 basis on either of two assumptions: (1) that the old plant is to be operated under the present market conditions, or (2) that a new plant is to be built and operated under present conditions. In the case of the old plant still in operation, the fuel and labor items would, of course, be increased but the capital charges would be the same as before, as no new investment would be in question. (The greater cost of reproducing such a plant today can be ignored for the present consideration.) If we assume that fuel now costs two and one-half times as much as then, and that labor, miscellaneous materials and capital are twice as expensive as formerly, we will have the following conditions for the old plant still operated and for a new plant:

OLD PLANT OPERATED ON 1920 CONDITIONS

	Fuel-Power Costs Per Cent	Water-Power Costs Per Cent
Fuel.....	125	
Labor and Miscellaneous Items.....	30	20
Capital Charges.....	35	90
Totals.....	190	110

NEW PLANT BUILT AND OPERATED 1920 CONDITIONS

	Fuel-Power Costs Per Cent	Water-Power Costs Per Cent
Fuel.....	125	
Labor and Miscellaneous Items.....	30	20
Capital Charges.....	70	180
Totals.....	225	200

It is evident that under the assumed conditions there would be a very large advantage in water-power developments built under the old construction costs as compared with an old fuel-power plant. The reason for this is obvious when one considers the great element of capital charge in water power, which capital charge is assumed not to have changed with the passage of time.

On the other hand, if we have to build both plants new today we find that there is only a very slight advantage in favor of water power under the assumed conditions, for all of the elements of cost have advanced more or less uniformly.

Just to illustrate the same conditions with a different assumption as to the increase in the various items of cost, let us take, for example, a double cost of coal, a double cost for labor and miscellaneous materials, and an increase of two and a half times for capital charges on new installations. The results for old and new plants on 1920 conditions would then be as follows:

OLD PLANT 1920 CONDITIONS
(Different increase factors)

	Fuel-Power Costs Per Cent	Water-Power Costs Per Cent
Fuel.....	100	
Labor and Miscellaneous Items.....	30	20
Capital Charges.....	35	90
Totals.....	165	110

NEW PLANT INSTALLATIONS FOR 1920
(Different increase factors)

	Fuel-Power Costs Per Cent	Water-Power Costs Per Cent
Fuel.....	100	
Labor and Miscellaneous Items.....	30	20
Capital Charges.....	88	235
Totals.....	218	255

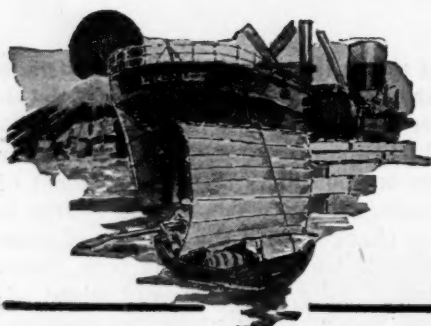
There is here evident the same large advantage of old water-power installations over old steam-power installations as is noted in the previous assumption.

It is evident here that there would be a small advantage in favor of fuel power under this set of assumed conditions. In other words, whether we find under the new conditions of 1920 an advantage for coal power or water power depends altogether upon the relative increase in fuel and in construction costs for the particular case in question.

The above data are, of course, simply assumed generalizations. They cannot by any means be considered applicable to particular circumstances. But the principles involved must be borne in mind in comparing carbo-electric and hydro-electric developments.

It is the man who has compared only *old* water-power and fuel-power developments under *present* operating conditions, and found considerable advantage for water power, who has doubtless strayed into the belief that water power is to be a cure-all for our national needs and that coal as a source of power development is a thing of the past.

Careful consideration of all the factors will show the fallacy of any such conclusion. The coal industry certainly need not assume that its period of usefulness is past simply because water-power development promises much for the future. The fact of the matter is that water power and fuel power are naturally supplementary to each other; and we must use both to the limit of our resources so that our industrial life may be advanced as rapidly as possible during the coming decade.



Foreign Markets and Export News



Freight Rates Are Lower; Market Is Firmer

Freight rates to European and South American ports, according to W. W. Battie & Co.'s Coal Trade Freight Report, are somewhat lower but the freight market is firmer than for several weeks, owing to the influence of the colliery strike. Freight rates by steamer follow:

	Oct. 11	Oct. 18	Tons Dis- charged Daily
Malmo.....	abt. \$13.50	abt. \$13.50	1,000
Copenhagen.....	abt. 13.50	abt. 13.50	1,000
Stockholm.....	abt. 14.00	abt. 14.00	800
Gothenburg.....	abt. 13.50	abt. 13.50	1,000
Antwerp/Rotterdam.....	10.50-11.00	9.50-10.00	1,000
Hamburg.....	abt. 12.50	abt. 12.00	1,000
French Atlantic (ex Rouen).....	11.50-12.50	10.50-11.00	700
Algiers.....	abt. 14.00	abt. 13.50	800
West Italy.....	abt. 14.00	abt. 13.50	1,000
Marseilles.....	abt. 14.00	abt. 13.50	1,000
Piraeus.....	abt. 14.00	abt. 14.00	1,000
Trieste/Venice.....	abt. 15.50	abt. 15.50	1,000
Port Said.....	abt. 15.50	14.00-15.00	1,000
Constantinople.....	abt. 16.00	abt. 15.50	500
Gibraltar.....	abt. 13.50	abt. 13.00	1,000
Pernambuco.....	14.00-14.50	abt. 13.50	500
Bahia.....	14.00-14.50	abt. 13.50	500
Rio.....	14.00-14.50	abt. 13.25	1,000
Santos.....	abt. 14.50	13.75-14.00	600
Buenos Aires or Montevideo or La Plata.....	abt. 14.00	13.00-13.50	750
Para.....	abt. 14.00	abt. 13.50	500
Rosario.....	abt. 15.00	abt. 13.75	750
To Nitrate Ran.....	10/12.00	10.00-12.00	750
Havana.....	abt. 6.00	abt. 6.00	500
Sagua or Cardenas.....	7.50-8.00	abt. 7.50	300
Cienfuegos.....	7.50-8.00	abt. 7.50	500
Caibarien.....	7.50-8.00	abt. 7.50	300
Guantanamo.....	7.50-8.00	abt. 7.50	500
Manzanillo.....	abt. 8.00	abt. 8.00	300
Bermuda.....	abt. 7.00	abt. 7.00	300
Bermuda p.e. and dis.....	free		
Kingston.....	abt. 8.50	abt. 8.50	400
Barbados.....	9.50-10.00	8.00-9.00	500
St. Lucia.....	9.50-10.00	8.00-9.00	500
Santiago.....	7.00-7.50	7.00-7.50	500
Port of Spain, Trinidad.....	9.50-10.00	8.00-9.00	500
Curacao, free p. c. Curacao.....	abt. 10.00	8.00-9.00	500
Demarara.....	abt. 13.00		
St. Thomas.....	8.50-9.00	abt. 8.00	500

All above rates gross form charter.

Coal Mining in Prussia Is Recovering

According to figures just published by the German Official Gazette, the production of bituminous coal in Prussia during the second quarter of this year amounted to 30,687,970 metric tons (compared with 23,380,934 metric tons during the same period of the previous year), the number of mines being 286 against 292 in the previous year. Sales reached 31,134,788 tons, against 23,641,454 during the same period in 1919. The number of employees and miners was 698,583, against 633,990 in the same period of 1919.

During the first six months of the present year the output of bituminous coal amounted to 59,748,127 metric tons as against 51,323,319 during the same period of the previous year. The total sales during the first half year amounted to 70,027,431 metric tons, compared with 51,204,921 tons in the first half year of 1919. These figures show that the output during the second quarter of 1920 increased over that of the previous year by 7,307,036 metric tons, or 31.25 per cent; the sales by 7,493,243 metric tons, or 31.7 per cent, while the number of employees and miners rose by 64,593. During the first half year of 1920 the output over that during the same period of 1919 increased by 8,424,808 metric tons, or 16.42 per cent; the sales by 8,822,510 metric tons, or 17.23 per cent, and the employees by 46,921.

In the brown coal mining industry the number of mines at work during the second quarter of 1920 was 349 (308 previous year), the output 22,253,382 metric tons (18,297,453 in 1919), the sales 22,262,152 metric tons (18,300,876 last year), and the number of employees and miners 131,914

910 (102,251 a year ago). The increase over the same period of the previous year thus amounted to 41 mines with 9,955,949 metric tons. For the first half year of 1920 the number of mines in operation was 341 (307 a year ago), the output 42,679,498 metric tons (35,451,946 during the same period of 1919) and the number of employees and miners 187,825 (95,574 a year previous).

German Manufacturers Clamor for American Coal Despite High Price

(Special to Coal Age)

BERLIN, Oct. 15.—The seriousness of the German coal situation is accentuated by the fact that as soon as a quantity of American coal has been freed for export a great number of German manufacturing concerns have come forward with large inquiries, in spite of the difference in price. The price of German coal is at present about 210-240 marks per gross ton, while American coal is quoted at \$30 c.i.f. German ports, which means at the present rate of exchange nearly 1,400 marks per ton.

The first firm that placed an order for American coal was the Zellstoff-Fabrik Waldhof, one of the largest German makers of wood pulp. They contracted for nearly 10,000 tons. Smaller orders had been given by some chemical and glass works. To this number has lately been added the August Thyssen mills in the Rhineland, which belong to one of the richest coal-mining combines. A public declaration has been made by them that they have to import coal to keep their works going.

As the importation of coal, as of all other products, is controlled by the state, an import license has to be obtained. The Commissioner for Import has established the principle that an import license for coal can be granted for the carrying out of export orders. In this way the burden of higher cost is shifted to foreign buyers of German goods. Mainly steam coal and gas coal of the richer grades, similar to the Ruhr qualities, are sought.

Italy Seeks American Coal

Being one of England's best coal customers, Italy is keenly interested in the progress of the British coal strike. Signor Sitta, Under Secretary for Transport and Coal Supplies, expressed the hope that increased supplies would be forthcoming from the United States. In September, America supplied Italy with 108,000 tons of coal, but only 24,000 tons went to private firms, owing to the uncertainty and want of confidence induced by the late disorders. Another considerable supply is expected from Germany, which should have sent 200,000 tons monthly.

An Italian commission has been sent to Silesia to investigate the reasons for the delay in order to eliminate them. Italian coal transports have been ordered from England to America and to Rotterdam, where they can be loaded with Westphalian coal. Signor Sitta also has urged the British Government to modify, with regard to Italian ships, its decision not to supply bunker coal.

It is not likely that Italy will feel serious effects from the British strike before the end of November, as the Government, in view of the possibility of the strike, accumulated reserves which now approximate 1,100,000 tons. The Fuel Board has announced that it is prepared to supply American and British coal to ocean-going steamers; German coal suitable for steamers, manufacturers and gas makers; Belgian anthracite and coke from Westphalia and Upper Silesia for metallurgic plants.

Independence of the Coal Industry Threatened

One Thousand Operators at Cleveland Discuss Plans to Meet Impending Hostile Legislation—National Coal Association Cannot Discuss Prices—Members Praise Work of Officers in Handling Situation This Summer

MEETING as individuals, approximately one thousand soft-coal operators, representing practically every bituminous producing district in the United States, assembled in Cleveland, Oct. 26, at the call of Colonel D. B. Wentz, president of the National Coal Association, to consider Attorney General Palmer's telegraphed request that steps be taken to eliminate exorbitant prices. As a result of the meeting definite action was taken toward lowering unreasonably high prices and discontinuing unwise practices in marketing bituminous coal.

W. K. Field, of Pittsburgh, moved that the whole question of the Attorney General's telegram be referred to the different districts. James B. Cooper, of Indiana, with the consent of Mr. Field, offered a substitute motion that it be the sense of the meeting that the coal operators of the United States co-operate fully and heartily with the Attorney General in this effort, but it seems that it can best be accomplished along the lines of Mr. Palmer's suggestions, but for the detailed consideration of this it should be taken up by the respective districts.

OPERATORS UNANIMOUSLY ADOPT RESOLUTIONS

T. L. Lewis, of Charleston, moved that the resolutions pending before the convention be referred to a committee of nine members to be selected by the chair. T. K. Maher, chairman of the meeting, appointed the following to serve on the committee: D. B. Wentz, Philadelphia, Pa.; W. K. Field, Pittsburgh, Pa.; Philip Penna, Terra Haute, Ind.; Everett Drennen, Elkins, W. Va.; A. J. Maloney, Chicago, Ill.; J. H. Allport, Barnesboro, Pa.; W. L. A. Johnson, Kansas City, Mo.; W. C. Mahan, Knoxville, Tenn., and S. H. Robbins, Cleveland, Ohio.

This committee reported the following resolution unanimously adopted and telegraphed to Mr. Palmer:

"Whereas, an abnormal condition for some time past has existed in the bituminous-coal industry of this country, due to inadequate transportation facilities, labor difficulties and shortage and other causes beyond the control of the bituminous coal operators of the country, and

"Whereas the Attorney General has requested the bituminous-coal operators of the country to co-operate with the Department of Justice in bringing about the elimination of unreasonably high prices for coal where such exist, and

"Whereas it is the sense of the bituminous-coal operators of the country that unreasonably high prices and unwise practices, where such exist in the industry be eliminated,

"Therefore be it resolved that the bituminous-coal operators of the country refuse to ask or receive unreasonably high prices for bituminous coal, and further that all unwise practices in the industry, where any such exist, be condemned and eliminated, and

"Be it further resolved that it be recommended to each bituminous-coal district in the United States that it immediately establish a committee in its district, and

that such committee so established use every effort to co-operate fully with the Department of Justice and the U. S. Attorney in such districts to bring about an elimination of unreasonably high prices and unwise practices, where such exist, in order that the purpose and the object sought by the Attorney General throughout of the whole country may be accomplished."

Colonel Wentz advised Attorney General Palmer as follows:

"At a largely attended meeting of bituminous coal operators representing practically every producing field in the United States held in Cleveland today I read your telegram of this date addressed to me here. After careful consideration and full discussion a committee of nine operators, of which I was chairman, was appointed and met immediately and drafted the resolution which I am advised has already been forwarded to you by T. K. Maher, an Ohio operator, chairman of the meeting. The resolution was presented to the meeting and unanimously adopted.

CO-OPERATIVE WORK HAS BEEN STARTED

"Operators from some of the districts are already holding meetings in Cleveland preparatory to arranging co-operation with your representatives in their respective districts, and other meetings between your representatives and operators will be held promptly throughout the several producing districts of the country."

The meeting, which was by far the largest in point of attendance and interest of any since the early part of the war, voted unanimously support of and confidence in the program and work of Colonel Wentz and the other officers and members who have been through the trying days of the past summer. It was believed that the meeting was for the purpose of considering the program of Attorney General Palmer for lowering prices, but it was soon made evident that any such action must be independent of the National Coal Association, for that body maintained its traditional policy of non-participation in any discussion of prices or profits.

The meeting of the association, which consumed all morning, was given over to the report of the president, who began by reciting the situation in April, beginning with the outlaw strike on the railroad and telling how production of bituminous coal in the Eastern fields was reduced from twenty-eight million tons a month to twenty-two million tons, which precipitated a shortage of coal throughout the East, New England and the Northwest. In the beginning the association protested to the Interstate Commerce Commission, asking for more cars. When politicians from New England and the Northwest made their appearance in Washington, seeking to make capital from the situation, it was time to act to protect the interest of the industry. How this was done was recited by Colonel Wentz in a manner that brought home to the operators the value and importance of their national organization.

Colonel Wentz praised Daniel Willard and other railroad men who had untiringly worked to prevent the coal

industry from being saddled with the form of Governmental control the railroads are now under. Washington officials were skeptical of the ability of the National Coal Association to work out a means of giving coal where it was needed most and the White House was fearful that the Interstate Commerce Commission had not the power to do what was necessary. How the promises of the coal industry have been fulfilled; how New England cried enough after two months of coal at the rate they demanded it and how the Northwest is fast being cared for and the domestic needs in Ohio and the Middle West cared for was told in justification of the apparent high-handed methods the men charged with caring for the interests of the industry and the railroads found necessary to impose.

By daily conferences with Secretary Tumulty and his office, the White House was kept informed of progress made and the insidious propaganda of those seeking Governmental control was offset. Assigned cars, the bane of the coal man's life, have largely been eliminated through the efforts of the National to take care of public utilities by more direct means. From twenty thousand a week in July assigned cars for utilities increased to forty thousand on Sept. 15, but they have now been reduced to nothing. Twenty-four thousand open-top cars were saved to the coal industry through the prompt action of John Callahan, traffic manager of the association, in showing what would result were the limit raised from thirty-six to forty-two inches in defining open-top cars in the last priority order.

SPECULATION IN EXPORT COAL STOPPED

Rabid and wild speculation in export coal was successfully opposed and largely eliminated through the hearty co-operation of operators, jobbers, railroads and tidewater exchanges by so framing rules that none but bona fide dealers could participate.

Although Senator Calder is not hostile to the coal industry it was pointed out that the record he has accumulated of high prices and abuses in the trade will go before Congress and may have a serious effect on the legislative program the coming winter unless complaints cease. Colonel Wentz expects hostile legislation to be introduced, in fact believes it will be an open season for the coal man. With all the force at his command he urged coal men to submit figures and statistics that will be called for by the National showing their costs, selling price and profits. Only with such vitally important data can officers meet charges that will be made by those really thinking something is wrong with industry as well as by those with political axes to grind. The coal industry must answer the charge that it as a whole has profited extortionately as well as some charges that have been and will be made. Discussing the recent Indiana law as showing the way the wind blows Colonel Wentz said the National would engage the best legal talent in the country to fight the law before the Supreme Court as it threatens the independence of industry and gives no real promise to the public.

Unity in the coal industry as a whole was urged and the meeting told of the action of the board of directors in appointing a committee of three—James Walsh, of Pittsburgh; Mr. Buchanan, of Chicago, and Colonel Wentz—to represent the producers with similar committees from jobbers, retailers and anthracite producers. The public press and the Government must find industry united on essentials, which it is not now.

In taking up the request of Attorney General Palmer to have prices considered, Colonel Wentz said the following:

"Early in October a committee of northern West Virginia operators put into effect some measures to reduce the prices of coal. On Oct. 13 I received the following telegram from the Attorney General:

Mr. Drennan, chairman of a committee of bituminous coal operators from northern West Virginia, has informed the department that prices of bituminous coal delivered in that district have been recently substantially reduced through the efforts of his committee. I consider it of the highest importance that the reduction of prices thus begun should be extended so as to include the operators in other districts and coal for delivery throughout the country, thus affording general relief from the prevailing high prices. Permit me to suggest to you that it is desirable for all persons engaged in the industry to take action in reducing prices, as this will be to the best interests of the industry and will lighten the work of the Department of Justice by reducing the number of prosecutions to be instituted for violations of the Lever Act in charging unreasonable prices.

ATTORNEY GENERAL PALMER EXPLAINS PLANS

"I met the Attorney General at the Department of Justice on Monday, Oct. 18. He explained to me his desire that the National Coal Association take action as suggested by his telegram. I explained to him the limitations imposed upon the National Coal Association with respect to such matters by the specific terms of its charter and by-laws.

The Attorney General stated that he would ask nothing of the coal producers which involved any violation of the law. The Attorney General then said that he would send me a communication to be placed before you at this meeting.

Mr. Palmer's telegram follows:

I am informed that you have called a meeting of operators of bituminous coal mines throughout the country at Cleveland for the purpose of complying with my recent suggestion that the operators should reduce prevailing unreasonable high prices for bituminous coal and thus lessen the number of prosecutions to be instituted by the Department of Justice for violations of the Lever Act in charging unreasonably high prices. If the operators limit themselves at that meeting to discussing prices with the sole purpose of preventing unreasonably high prices and without any attempt directly or indirectly to fix prices I would consider such action as an effort to comply with the Lever law. It would be particularly helpful to this department if in pursuance of the general purpose to reduce prices the operators could arrange for reports to me voluntarily made to our district attorneys in cases where any operators continue to charge unjust and unreasonable prices. You will understand, of course, that I assume there will be no effort directly or indirectly to hold prices up or to make them uniform for any of the producing or consuming regions, either by the operators at the Cleveland meeting or by any of their committees or representatives.

Erskine Ramsey, vice president, of Alabama, then moved adjournment of the association meeting, having expressed his conviction that most operators oppose excessive prices as not in the interest of the industry. It has been the policy of most producers, he said to apply that belief conscientiously in the scale of their coal. Because it is the fixed policy of the National not to discuss prices the meeting adjourned. Following this Thomas K. Maher, of Ohio, was elected temporary chairman; S. L. Yerkes, of Alabama, secretary of a meeting of the coal operators who considered Palmer's telegram and request, after which the above-mentioned committee of nine was appointed.

Lloyd George Agrees to Discuss Settlement

LAST Saturday the big British coal strike entered on its second week, the prospects of a speedy determination having increased by reason of Lloyd George's offer to discuss a settlement. It appears that his action was brought about by the threat of the railway men to strike if action of this sort or a satisfactory settlement was not made.

General Secretary James Henry Thomas, of the railway men's union, tried for a long time to keep the railroad men neutral. When they met on Oct. 19 they took no action; the next day they voted by a majority of one not to strike, and then later, by a majority of only ten or eleven, there being about sixty delegates present, they reversed their vote and sent notice to the railroad men throughout the United Kingdom that they were to strike on Sunday at midnight unless the notice was countermanded. It is thought that Thomas will resign, as he is strongly opposed to this sympathy strike.

Following this notice an ultimatum was served on Lloyd George on Oct. 21 that he must either grant the mine workers' demands or reopen negotiations or a strike would take place at the hour set. This appears to have been the reason why the Premier on Saturday, Oct. 23, wrote to Frank Hodges, advising him that he (Lloyd George) would meet the principal officials of the union, try to arrive at a settlement and then call in the executive council of the union and with their aid finally dispose of the matter. Robert Smillie, Herbert Smith Robson and Frank Hodges are the negotiators.

The government wants assurance that increased wages

will not mean decreased production. It would set a "datum line" for output and take away any increase given the miners, should the datum line not be reached. Many of the mine workers believe that some such compromise should be made. Otherwise the strike would seem to be called merely to provide means for further loafing. It is likely that the 48c. advance per day will be granted if the mine workers promise that the output will be increased to the "datum line."

On Oct. 22 the government, through Edward Shortt, the Home Secretary, brought in a bill reviving war-time emergency regulations which give the government the right to use military forces for any purpose and also authority to ration and control all resources. Action on the bill, however, was deferred till Monday, Oct. 25. Much to the displeasure of the unions the government is enrolling volunteers. Robert Williams, general secretary of the transport workers, has announced that the workmen he serves "look upon the danger of the enrollment of volunteers, especially from the middle class and white guards of the community, as of more provocation than the use of troops."

At Coedly, in Wales, the mine workers have voted in favor of seizing the mines and locking out the owners. They advocated running the mines themselves as the Italian workmen for a while ran Italian factories. This same example some Scots on the Firth of Fourth are anxious to emulate. The Rhondda mine workers want to call out the pumpers and those in Durham have already withdrawn them. In Yorkshire the mine workers are conciliatory. Some mine workers are leaving for Canada.

Suspension of Lake Priority Forecast

SUSPENSION of the priority on coal moving to the Northwest appears imminent at this writing. Apparently the Interstate Commerce Commission is not satisfied as to whether the saturation point has been reached or whether price considerations temporarily have halted the demand. It was quite evident at the Interstate Commerce Commission that there would be no temporizing with the situation. Contracts will have to be forthcoming quickly if the order is not suspended. It seems that the Northwest is not prepared to absorb coal at the rate of 4,000 cars daily at the lower Lake ports.

A big factor in the situation was the transfer by Northwestern railroads of 3,000,000 tons of their business to Illinois producers. Apparently the Interstate Commerce Commission already is satisfied that the Northwest's needs for the remainder of the season can be handled without regulations, but, as was the case with New England, the commission doubtless will wait until the Northwest is absolutely on record as being unable to absorb coal in the volume in which it is being moved for its account. The prediction in Washington on Monday, Oct. 25, was that the suspension of the Lake order would come not later than Wednesday.

On Oct. 22 the Interstate Commerce Commission authorized H. M. Griggs, manager of the Lake pools, to omit allotments under Service Order No. 10 against mines in the following districts, until further advice from the commission:

- (1) Mines upon the Louisville & Nashville R.R.
- (2) Mines in the Irwin gas coal district or basin.
- (3) Mines in the northern Ohio districts, the middle districts of Ohio lying between No. 8 group and the Great Lakes, including Coshocton, Berkholtz and Massillon, and Goshen, Salineville and Tuscarawas; and also the Butler-Mercer districts in Pennsylvania.

In addition, allotments may be omitted against wagon mines and mines producing stripper coal until further advice from the commission. This is the first sign of a falling off in demand for Lake coal.

The week of Oct. 18-23 opened with an excess of cars standing at the ports awaiting dumping. On Tuesday morning, Oct. 19, there were 11,004 cars of soft coal on hand, a figure greater than normal, as shown by the statement of cars on hand at recent dates, as reported by the American Railroad Association:

Aug. 25.....	10,404	Oct. 5.....	9,066
Sept. 3.....	7,757	Oct. 12.....	9,432
Sept. 9.....	8,554	Oct. 19.....	11,004
Sept. 16.....	7,318	Oct. 20.....	10,211

In an announcement made Oct. 20 in Cleveland, Judge McGee said it was probable that the estimated requirements of the Northwest would be considerably reduced on account of the refusal of many of the railroads in that territory to contract or buy dock coal at prevailing prices, but rather to turn to Illinois for their supplies for the coming winter.

Retail Association Executives Meet to Consider Trade Problems

AT A MEETING of the secretaries and executives of the various retail coal associations held under the auspices of the National Retail Coal Merchants' Association on Oct. 25 and 26 at the Hotel Astor, New York City, many items of interest to the retail coal trade were discussed. Among the subjects considered were:

Reasonableness of liability clauses of sidetrack agreements and rental charges made by carriers for use of sidetrack or property.

Adoption of uniform claim rules by carriers and enforcement of principles involved.

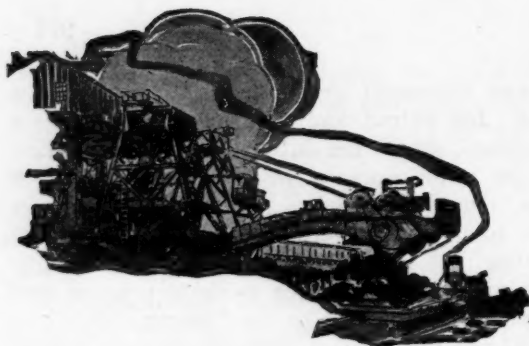
Institution of test cases to determine disputed points in settlement of claims.

Modification of present reconsignment rules.

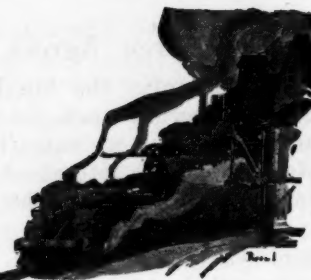
Correction of unreasonable or discriminatory rates growing out of recent rate advances.

Uniformity in claim collections by all associations.

Method of obtaining funds to combat prospective Government regulation of the retail coal industry.



Production and the Market



Weekly Review

RECORD production of bituminous coal the past few weeks has had a remarkable effect on the market. One of the strongest evidences of this is found in the latest developments in the Lake situation, where shipments according to the program laid down by the operators and the railroads of 4,000 cars per day has flooded the lower Lake ports with coal and has broken the price. Whereas shippers were demanding \$8 per ton a few weeks ago, prices have now dropped to \$6@6.50 because of the large offerings resulting from the record production and the excellent performance of the railroads.

There is a general feeling in the trade that the Illinois operators and shippers have "put one over" on the West Virginia producers this year in that they have been putting the coal into the Northwest while the Easterners were arguing over the price. It will be interesting to see to what extent they can hold this market next season.

RECORD-BREAKING OUTPUT ATTAINED

Record production for the week ended Oct. 16 is reported by the Geological Survey, with 12,135,000 tons of bituminous and 1,855,000 tons of anthracite.

Labor is working better than at any time this fall and cars are more plentiful. Despite the greater offerings of cars the reports of car shortage still show average losses on operating time in excess of 20 per cent. This will continue until the market is saturated, when losses because of no market will take the place of those reported for lack of cars. Two or three weeks of production at the present rate will accomplish this, for, as was forecast in *Coal*

Age of Aug. 26, an average output of 11,500,000 tons a week of soft coal until the first of November would be sufficient to raise stocks to the point where consumers would lose their fear of shortage and would withdraw from the market.

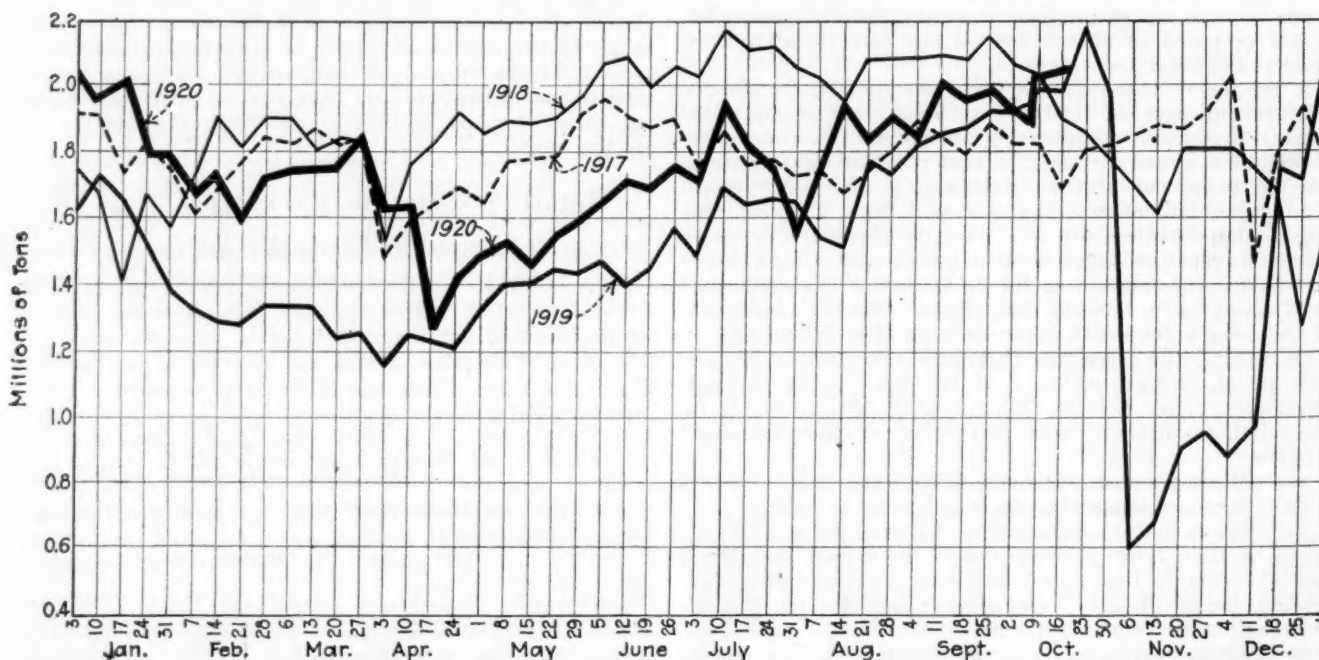
Anthracite will continue to be short for some time. Production of this essential domestic fuel is lagging and has only begun to make up the losses occasioned by the strike of last month. Investigations of prices being charged by the retail trade for anthracite are developing over the country but it is believed that in the main the retailers can justify their selling prices because of the Independent high-priced coal they have purchased.

BITUMINOUS

Production during the week ended Oct. 16 was, with one exception the greatest in any week since the Armistice. It is estimated that the output reached 12,135,000 net tons, an increase of 44,000 tons over the preceding week, according to figures of the Geological Survey. A production of 13,140,000 tons was reached in the last full week before the coal strike of 1919, but with this exception the week of Oct. 16, 1920 stands as the maximum since the Armistice. The average production per working day was 2,022,000 tons. Preliminary reports for the succeeding week indicate a slight decrease in production.

Car supply has greatly improved, due to the extension of rulings made by the Interstate Commerce Commission relative to the assignment of open-top equipment for coal loading, and also to quicker dispatch. However, the middle

Average Daily Production of Bituminous Coal*



*From weekly report of Geological Survey.

Lake Coal Dumped Season to Oct. 23

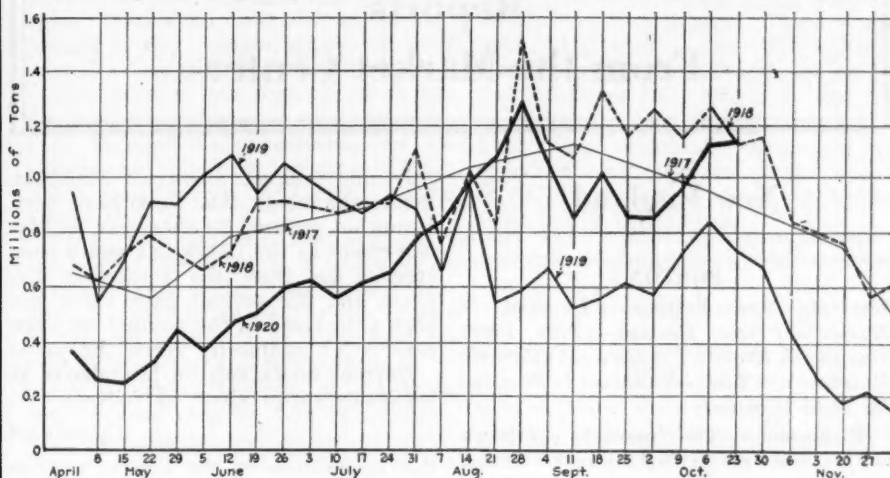
(NET TONS)

	1919	1920
Cargo	20,409,873	18,137,768
Fuel	963,213	1,032,736
Total	21,373,086	19,170,504

Week of Oct. 23, 1920

Cargo	1,088,041
Fuel	50,176
Total	1,138,217

Weekly Dumpings, Bituminous Coal at Lake Erie Ports



Appalachian region reports a slump in car placements which is also enabling not more than a two days' run in the southern Appalachian district. Car supply in the Midwest section is the best for many weeks.

A radical labor element in the eastern Ohio field is responsible for a considerable loss in output as the men in that section are not giving more than 50 per cent working efficiency. This same element is causing many petty strikes in the Belleville district. The Alabama strike situation is somewhat improved; men are returning to work rapidly, which is also the case in the Thacker field. A very marked improvement in labor's attitude is apparent in nearly all other sections.

EXPORT PRICES LEAD THE MARKET

Prices appear to be taking a very marked downward trend. With a lessened demand for steam coal throughout the country, the only feature in the week's market was the call for export, influenced by the overseas shortage due to the British strike. Pittsburgh district coal is off, steam now being quoted at \$8, gas \$8.50@9, a reduction in the latter case of \$1@2. Fairmont quotations are \$6@6.50 to conform to recommendations of the Fair Practice Committee. Pittsburgh No. 8 is weaker, ranging \$6@7. Philadelphia reports firm prices due to heavy export demand, with Pool 10, \$10; Pool 11, \$9@9.50, and Pool 18 slow at \$8. The Baltimore market is a trifle firmer on these pools. New England reports a sharp slump in industrial demand with gas coal off to \$9.50 and steam generally quoted \$8.25@9.50. Chicago and Midwest prices approach normal with better production and less active demand; southern Illinois, \$5.50@6.25; northern Illinois, \$5.25@6, and Springfield district, \$5@5.50. St. Louis experienced a slump in steam coal with quotations of \$4@5.50 for Mt. Olive, \$4@5 for Standard, and \$4.25@5.50 for Cartersville. Indiana and Kentucky districts report lower prices, due to price regulations, although many Indiana operators are sending the bulk of their production to points outside the state limits at \$5@6.50 for Fourth Vein and \$5@5.25 for Fifth Vein. The Western market is good, Colorado steam being quoted \$3.50@3.90 f.o.b. mines. Domestic demand continues unabated and only the unseasonable warm weather has kept prices at their present levels.

Cars of bituminous coal dumped over Tidewater piers during the week ended Oct. 16 numbered 26,357, as shown in the following table:

Week Ended	New York	Philadelphia	Baltimore	Hampton Roads	Charleston	Total
Oct. 2	9,121	3,673	4,197	8,872	498	26,361
Oct. 9	9,304	4,188	4,242	9,587	376	27,697
Oct. 16	8,565	4,061	5,176	8,328	227	26,357

Measured in tons the Tidewater movement during the week ended Sunday, Oct. 17, increased slightly. According to the Geological Survey, a total of 1,301,000 net tons was handled at Tide, destined as shown in the following table

Destination	New York	Philadelphia	Baltimore	Hampton Roads	Charleston	Total Dumped
Coastwise to New England	71,000	19,000	23,000	97,000	.....	210,000
Exports . . . . .	.....	139,000	207,000	333,000	4,000	683,000
Bunker	68,000	11,000	19,000	78,000	1,000	117,000
Inside Capes . . . . .	.....	43,000	27,000	4,000	.....	74,000
Other tonnage	140,000	.....	9,000	7,000	1,000	157,000
Total	279,000	212,000	285,000	519,000	6,000	1,301,000

While Tidewater shipments to New England showed a slight increase the all-rail movement was much slower. Some buyers have intimated to their shippers that it is doubtful if November program of shipments, previously requested, can now be accepted due to the slackening in manufacturing activity.

Exports to Canada of bituminous coal for the month of September are reported by the Dominion Bureau of Statistics at 1,787,455 net tons, a total for the first nine months of the year of 10,144,000 tons, or an increase of 802,000 as compared with the same period in 1919.

LAKES PRIORITY ORDER TO BE CANCELED

Lake dumpings for the week ended Oct. 24 totaled 1,138,217 tons, an increase of some 30,000 tons over the preceding period. The cumulative movement from the beginning of the season now stands at 19,170,504 tons. The week opened with an excess of cars standing at the ports awaiting dumping. On the morning of Oct. 19 there were 11,004 cars of soft coal on hand, a figure greater than normal as shown by the statement of cars on hand at recent dates. Lake demand is sluggish and it is apparent that the saturation point has been reached. With a growing accumulation of cars at the lower ports it is only a question of hours before a suspension of Service Order 10 is ordered. At this writing embargoes have been placed in several districts against shipments to the Lakes. The Northwest railroads now plan to draw on the Illinois fields for approximately 3,000,000 tons of fuel, cutting down dock requirements by that amount.

ANTHRACITE

Steady improvement in the production of hard coal is indicated by the loadings for the week ended Oct. 16, when 36,114 cars, an increase of 153 cars, were shipped. The total production was estimated by the Geological Survey at 1,855,000 net tons, the largest in any week since last July. Current production is still short of last year's schedule, when a weekly rate of 1,925,000 tons was attained.

Prices for the Company product are unchanged, while Independent operators continue to secure premium figures up to \$17 f.o.b. mines. Domestic consumers are clamoring for coal and only the continued mild weather has kept the price from higher levels. The Baltimore market is stirred by the announcement of one of the largest retailers, who has advanced domestic sizes \$1.50 above the Coal Exchange schedule.

Reports From the Market Centers

New England

BOSTON

Receipts Are Falling—Demand Is Easier—Prices Decline—Tide Piers Busy with Export Tonnage—Anthracite Receipts Are Low—Situation Is Favored by Mild Weather.

Bituminous—The market continues with almost no buying interest. Steam users throughout New England have ample reserves for a winter of slack production and only very occasionally are there sales of any considerable tonnage. Railroads are buying moderate quantities but usually these are to replace high volatiles due on contract which for the present are moving to the Lakes. Prices now paid are little in excess of \$8 and although of medium grade, the coal to be furnished must be favorably known. Demand as a whole is extremely light and were the situation dependent upon buying current quotations would weaken materially.

All-rail movement has dropped to a weekly average of little more than 5,000 cars and this is perhaps the best index of the current situation. There are no longer any traffic problems so far as coal is concerned and not in three years have cars come through in so short a time. By water there is also a marked falling off in receipts.

Buyers who 90 days ago were bidding high for indifferent grades from central Pennsylvania are now serving notice on their Pocahontas and New River contractors that they are in doubt about taking November quotas. Meanwhile, the only recession in price of Tidewater coal is because of less demurrage at the loading port. Should the all-rail market yield coal at \$1@ \$1.50 less than current quotations a considerable tonnage of Southern coals would be a drug on the market. However prices have not softened to the extent anticipated. Grades from Pool 1, 4, 9 and 10 command \$9.25@ \$9.50 at the mines, but Pools 11 to 14 are an easy purchase at a full dollar less, being affected only remotely by export and bunker demand.

It is much easier to secure fancy high volatiles. A few days ago screened lump was almost out of the question for spot shipment but today there are enough offerings to meet requirements of the relatively few foundries, etc., that are running full time. Gas producers are also in easier situation. In consequence, prices have dropped from \$11 to about \$9.50.

Practically all of the Tidewater piers show export clearances well up to the

July and August average. Hampton Roads shipments this week have been somewhat reduced by short car supply. Movement to the Lakes has again been speeded up from the smokeless districts and for several days there has been a decrease in the number of large cars which ordinarily serve the piers.

Current quotations on bituminous at wholesale range about as follows:

	Clearfields	Cambrias and Somersets
F.o.b. mines, net tons	\$7.50@ 8.50	\$8.00@ 9.50
F.o.b. Philadelphia, gross tons	11.00@12.15	11.60@13.25
F.o.b. New York, gross tons	11.40@12.75	12.00@13.75

Anthracite—Shipments both all-rail and water are discouragingly low on domestic sizes. Effort is being made to rush coal to communities where the tonnage thus far has been less than 50 per cent. It follows that the larger cities are receiving materially less than the usual fall monthly average. Current output is being spread over so wide a territory that shipments in any one direction seem meager. Undeniably there is a larger tonnage in consumers' cellars than is generally acknowledged. Already there are retail dealers who say they have enough pea and chestnut to meet ordinary requirements and it is expected that from now on there will be less disposition to accept whatever sizes the companies see fit to furnish. In all this the weather is the uncertain factor. The warm spell has been the salvation of a great many retailers who have had very light stocks.

Tidewater

PHILADELPHIA

Anthracite Receipts Are at Low Ebb—Warm Weather Delays Fuel Needs—Bituminous Line Trade Is Quiet—Export Call Keeps Prices Up—Operating Conditions Are Improved.

Anthracite—So far as local conditions are concerned there is not the least improvement. Shipments to dealers come close to being the lightest on record. The extraordinary summer weather has served to lessen their troubles. There is not the least doubt that with the arrival of more seasonable weather, the companies will begin shipping heavily into this territory.

Considering the state of the weather, the domestic demand holds up remarkably well, although the consumer still calls for the larger sizes. Yards are without coal of any size, except a small quantity of pea. It is reported that the independents are getting premiums on this size for shipment to the West.

Dealers in some of the larger cities in the eastern end of this state have sent delegations to the shippers to present their needs. The most that has been accomplished by these committees is that this market will have attention as soon as possible, which means within the next five or six weeks.

A good many of the local dealers have been favored recently with some buckwheat, a fairly strong demand having sprung up for this size, and the companies have probably allowed them to have this coal in view of the less urgent industrial demand and with the idea of desiring to foster this newly created market for a size which is likely to become troublesome with the return of normal conditions in the coal trade.

The demand for steam coals of all sizes except barley is still strong. On spot sales, buckwheat has been \$6 and rice \$5.

Bituminous—There is a noticeable quietness in the local demand. Without exception the brokerage houses which were rushed with business hardly less than a month ago, are now waiting for something to turn up. Despite this apparent lethargy, prices continue to hold up and have shown no real recessions during the past week. This is due entirely to the growth of the export trade which has been greatly accentuated by the British strike. The demand for coal for export has become so strong that buyers are competing against each other.

Line delivery prices are based upon the market figure for Pool 10, which has been clinging to \$10. In Pool 11, the average is \$9@ \$9.50. Pool 18 is in little demand at \$8. On wagon-mine coal, prices are often shaded \$1 less and shippers are finding it difficult to make a market, particularly since they have been denied the use of open-top cars.

Industry in this district is still quiet, particularly the textile lines, but recently there has also been some curtailment in the iron trade. Even though very few industries were able to contract full requirements in the spring, they have, under present conditions, accumulated much stock. The big utility plants have now been able to lay by their customary reserves, and despite the removal of the preferential order, are getting sufficient coal for their current requirements.

Production is approaching close to the war-time tonnage. Of course, this is brought about by greater car supply, which lately has gone as high as 50 per cent and better. The general trend is upward and with a continuance of good weather, it would not be surprising that this would cease to be a factor in the trade until real winter weather arrives.

Rail movement has improved quite noticeably. The railroads are doing considerable weeding-out among their employees and the result has been better service from those remaining.

Tide business at this time is the real backbone of the bituminous industry. Consumers in this section could not begin to absorb the present production

without the assistance of foreign business.

As it now stands, the amount of overseas trade offering is greater than the ability of the industry to handle. Piers are working to capacity and there is little chance of increase of movement. Most export coal is being sold on a basis close to \$15 a ton at Tide.

Coke—Demand continues moderate, although prices are well up. On Connellsville foundry coke quotations recently have been \$17@17.50, with furnace coke a dollar less. There are also some ordinary grades of foundry occasionally to be had around \$16 net ton at ovens.

NEW YORK

Anthracite Conditions Improve—Receipts Are Larger—Steam in Good Demand—Bituminous Market Slackens and Prices Are Easier—English Strike Increases Bunker Demand.

Anthracite—There has been a noticeable improvement in conditions. More coal has been coming to Tidewater although still below normal requirements.

The improvement in production has been reflected here and the dealers have been receiving larger shipments. Most dealers still have unfilled orders dating from March and April. The near-panic created by those who claimed there was danger of New York freezing this winter has subsided considerably, due, probably, to the efforts of the trade in assuring their customers that there would be plenty of coal after the closing down of Lake shipments. The clamor for coal is not as strenuous as it was a week back.

The surrounding territory is in good shape. Dealers have fair sized stocks while all of their customers already have most of their winter coal.

There is a strong demand for independent coals but buyers are not inclined to pay the prices asked unless it is absolutely necessary. The larger independent producers are sticking close to the 75c. differential above the company prices but the smaller operator is quoting anywhere from \$12@14.50 for the prepared coals.

Smaller sizes continue in strong demand. Buckwheat is being quoted by the independents at from \$6 and some producers find it necessary to insist upon buyers of domestic taking a share of barley. Quotations for barley range \$1.75@2.25.

Quotations for company coals, per gross ton, at the mine and f.o.b. New York Tidewater, lower ports, are as follows:

	Mine	Tidewater
Broken.....	\$7.60@7.75	\$10.21@10.36
Egg.....	7.60@7.75	10.21@10.36
Stove.....	7.85@8.10	10.46@10.71
Chestnut.....	7.90@8.10	10.51@10.71
Pea.....	6.10@6.55	8.57@9.02
Buckwheat.....	4.00@4.25	6.47@6.72
Rice.....	3.00@3.50	5.47@5.97
Barley.....	2.25@2.50	4.72@4.97
Boiler.....	2.50@2.75	4.97@5.22

Quotations for the domestic coals at the upper ports are generally 5c. higher on account of the difference in freight rates.

Bituminous—Many believe the market is sliding. Demand has fallen off

and quotations are easy. Manufacturers are not buying but the demand for bunker supplies has increased considerably. This is due to the efforts of ship owners to put a return supply on their vessels because of the English strike.

The strike in the English mines has not yet been reflected in the local market. Demand for export coal has not shown any noticeable increase but has aided considerably in keeping prices where they are.

That the markets are not overstocked is attributed to a shortage of cars and labor unrest. The former condition is said to be due to the failure of the railroads to have their cars returned from the anthracite fields.

Quotations at the end of the week were easier, ranging from \$7.75@10, dependent upon supply and demand. Pool 11 was quoted \$7.75@8.25 at the mines, Pool 10 from \$8.50@9, Pool 34 \$9.25@10. Tidewater quotations ranged \$12.50@14.

BALTIMORE

Market Is Somewhat Easier—Heavy Export Loadings Break Pier Records—Prices Have Advanced, Due to British Trouble—Car Run to Mines and Loadings Improve—Hard Coal Situation Is Acute—Many Changes in Line of Customers.

Bituminous—There is an undoubted tendency toward an easier market, although prices have just stiffened, following a light break. The supply is good and reports from the railroads show a larger run of empties to the mines and a much better loading. The Eastern car supply is now generally over 60 per cent on the B. & O., over 75 on the Western Maryland and 60 @70 on the Pennsylvania. B. & O. daily car loadings are now generally over the 3,000-ton mark.

British strike complications have not made much difference here so far. There are several coal ships here for cargoes, presumably for England, and several vessels loaded here recently for Rotterdam are said to be really on the way to English ports.

Prices are now 50c. or so better than a week ago. Best coals on both the Pennsylvania and B. & O. are worth around \$11. Pool 10 is worth about \$10, Pool 11 around \$9.50 and Pool 18 is \$8.50@9. Best gas coals are selling at \$11, or on a par with the better steam fuels.

More export records are being broken here, despite the close scrutiny of shipments on permits. Up to Oct. 19 a total of about 340,000 tons were loaded. The B. & O. pier at Curtis Bay broke all records for dumping last week when in a single day it turned over 910 cars, or 43,000 tons. At the same time the Locust Point pier dumped 59 cars, and the Canton pier of the Pennsylvania around 200 cars.

Anthracite—The hard coal situation here remains acute, especially as to standard larger sizes, which are almost impossible to get. A few dealers, losing some old business, claim that those

supplying the coal to new connections are doing so when they still have a large number of old customers on books with orders undelivered. There is also some talk that a few dealers have charged above the schedule as set by the Baltimore Coal Exchange and this has caused some heated complaints. Such things invariably come up in coal shortage times, however. Warm weather is aiding the situation by halting much early consumption.

Lake

BUFFALO

Steam Prices Still Sagging—Cars Are Fairly Plentiful—Miners Not Working Actively—Big Anthracite Rush.

Bituminous—A decline has unsettled prices till nobody is sure of them. It is not uncommon to get quotations of \$7.50 for Pittsburgh, mine price.

So the trade is obliged to proceed with much caution. The consumer also hears of lower prices and he has a way of refusing his purchases on arrival, so that even Pittsburgh, which has all along held firmer, is no longer so much above the Buffalo market. Lump is decidedly stronger than mine run or slack. Buffalo has a way of using the less stable Allegheny Valley market to combat the Pittsburgh strong position for the Allegheny Valley coal is in most instances good enough to meet the needs of consumers and besides there is a second advantage in a lower freight rate.

Gas coal is not weakening. It has become decidedly scarce and the asking price is up to \$11@12. Jobbers here often report that they cannot get any so they are not in any way in control of the situation. This, with the advance of steam lump over slack may soon make it necessary to quote everything separately as in former years.

An easier car situation is noted every week. The miners are not working with much vim, but they do not make the demands that they did.

Anthracite—The local "shortage" has been aggravated by newspaper reports, which prefer to take the scare side and to stir up people needlessly. So the larger retail offices are now beset with orders. Meanwhile the independent operators are asking as high as \$17 for egg at the mines and apparently getting it.

There is no real shortage. The usual amount of coal has been distributed and will be right along. The shippers can say that and they do, but the reply is "I want it now," so the rule has been made not to deliver more than two tons on an order. Retail delivered prices are \$13@13.25.

There is the average amount of coal coming in and as soon as the Lakes close that will be turned into the city trade as usual and the clamor will cease.

Lake—Shipments continue good though the shortage from last season

is not likely to be made up. Total for the week is 107,150 net tons, of which 41,000 tons cleared for Duluth and Superior, 33,100 tons for Chicago, 8,000 tons for Milwaukee, 7,800 tons for Fort William, 7,400 tons for Port Arthur, 7,000 tons for Sheboygan, 2,850 tons for Racine. Freight rates are strong, vessels going light to take 7c. grain. Quotations: \$1.50 to Racine, 85c. to Chicago, 75c. to Milwaukee, 70c. to Sheboygan, 60c. to Duluth, Fort William and Port Arthur.

Coke—The market is unsteady as usual, as local jobbers are asked chiefly to make up occasional shortages at the big furnaces. Latest quotations from the Connellsville district are \$18 at the ovens for 72-hour foundry, \$17.50 for 48-hour furnace and \$15.50@16 for high sulphur and stock. Domestic sizes are mostly byproduct obtained of Buffalo producers, \$8@8.50 for chestnut and \$5@5.50 for pea, to which add mostly 50c. for delivery. Domestic coke is very unsteady in price, as it comes from all sources, some of it being blowings from beehive plants.

CLEVELAND

Coal Market Is Unsettled—Quotations Show Weakening Tendency—Operators Welcome Lower Prices—Receipts Are Increasing—Coal Conference To Bring Better Situation.

Bituminous—The expected price reduction has not materialized generally, although a weakening in quotations is apparent. Operators are waiting the outcome of the conference of coal men of the United States, scheduled for Cleveland, at which the subject of cheaper coal will be taken up. Generally speaking, operators and distributors in the northern Ohio district would welcome a readjustment. Such action would probably silence the agitation for Government investigation and bring to a halt the steps now being taken by the Cleveland district attorney.

In Ohio fields the situation is a difficult one because of the unwillingness of the miners to give 100 per cent efficiency. The slightest provocation is sufficient to cause them to become disgruntled. As coal production is now below normal the car supply is adequate. Coal has been coming forward a better rate. The daily average has been worked up to about 87 cars for Cleveland alone, which is nearly double that prevailing two weeks ago.

Prices for spot No. 8 slack at the mines vary. Quotations as low as \$4 were named early in the week, while the highest price has been \$7. The average price at which spot coal is moving is much lower than a few weeks ago and stands \$6@7. Retail prices for No. 8 dropped from \$12 to \$10.70. West Virginia Splint and cannel lump advanced slightly.

Pocahontas and Anthracite—Domestic demands have been swelling despite warm weather that has prevailed. Fear of a gas shortage has stimulated the desire to lay in coal supplies. Some of

the retailers have been getting better supplies, but deliveries are falling short more than 50 per cent. After suspension of the Lake priority it is expected that coal supplies will be much more plentiful and the prices lower.

Lake—Coal has been coming forward to the Lakes on contract at a good rate. The roads have been dumping about 3,500 cars daily. Vessel movement to the Northwest is running 25,000 tons weekly. These shipments exceed the fixed goal by 1,000 tons.

Retail prices of coal per net ton delivered in Cleveland are:

Anthracite—Egg, \$16.50; chestnut and stove, \$16.25 @ \$16.50.
Pocahontas—Shoveled lump, \$15@16; mine-run, \$12.50.
Domestic Bituminous—West Virginia Splint \$13.50; No. 8 Pittsburgh, \$10.70; Cannel lump, \$15.25.
Steam Coal—No. 6 and No. 8 slack, \$11@12; No. 6 and No. 8 mine-run, \$12.50; No. 6 1/2 in. lump, \$12.50.

MINNEAPOLIS

Milder Weather Aids Fuel Situation—Bituminous Movement Improves—Shortage Is Not So Serious—Anthracite Stocks Are Satisfactory—Trade Is Unwilling To Pay Present Prices.

Due to the prolonged mild weather, the general coal situation seems somewhat better. Some good work has been done in the way of increasing deliveries at the lower Lake ports. Part of the time the dumpings have been over the 4,000 cars a day set for the required amount.

The gain on hard coal, plus the slight increase this year over deliveries of a year ago, make the situation on that grade fairly satisfactory. The comparison with a year ago must take into consideration that there was a surplus last year from the preceding season which did not exist this year. This season's deliveries to Oct. 1 show a gain this year of 79,000 tons which augmented by the saving through the mild weather of the fall, ought to make the total serve pretty well through the winter.

On soft coal, the situation is much different. There is a shortage of receipts to Oct. 1 of nearly 2,000,000 tons, while the carry-over in the spring of 1919 was 2,000,000 tons against about 800,000 only in the spring of 1920. This applies to commercial coal, exclusive of railroad and steel corporation supplies.

It does not seem to be humanly possible to make up any major portion of this amount between now and the close of navigation. Good movement is being made now, but it is only serving to make up in some degree the shortage which prevailed earlier when the deliveries went below the quota.

One serious feature now is the uncertainty as to the mine prices. The present high mine costs would hardly endure if the car situation became sufficiently free to permit capacity runs. Even now, there are reports of an occasional easing of the extreme figures.

The trade feels certain that there will be a shortage of soft coal in the Northwest and that high prices will prevail. Yet it cannot be assured that there may not be some break from the

extreme figures at the mine, when there is a catching up of the deliveries so that the demand from other sections is not so urgent. And the chance of a loss, if there should be a break that would drop the price \$1 a ton, would be serious.

Coal is accumulating rapidly at the lower ports. All-rail movement has been heavy and the general situation shows a decided improvement of late.

MILWAUKEE

Federal and State Coal Investigation Is in Progress—Lake Receipts Are Better—Retail Situation Is Unsatisfactory.

Interest at Milwaukee and throughout the state is centered just now in an investigation of fuel conditions, both as to price and supply, which was inaugurated by Attorney-General John J. Blaine at Madison, Wis., following complaints lodged by Gov. E. L. Philipp and Marketing Director Edward Nordman. Dealers will be called upon to explain their prices and profits. United States District Attorney H. A. Sawyer is also investigating complaints made by consumers against Milwaukee retailers.

The average price charged for chestnut anthracite this year is reported to be \$16.50 per ton, or \$4 above last year's figures and \$7 above the price asked in 1916. Milwaukee wholesalers refuse to be quoted in regard to the matter.

Those who have investigated the fuel situation in Wisconsin state that there are thousands of homes without coal at the present time. The first cold snap will cause a stampede for the coal yards and if the supply falls short much suffering is predicted.

Prices of anthracite remain steady. Pocahontas is higher; stove, egg and nut now retail for \$16.25 and mine-run at \$13.75. Steam Pocahontas is selling at \$11. Lake coal is coming in reasonably well. Preparations are being made to take care of an unusually large fleet at the close of the season.

Inland West

INDIANAPOLIS

Trade Is in Critical Condition—Tonnage Goes to Better Markets out of State—Retailers Unable To Get Supplies.

Operators are not selling to Indiana retailers to any marked extent. Most of the coal is going outside the state. Labor troubles are reduced to a minimum and the car service is improving.

The coal commission has made its ruling that the retailer shall not pay more than \$3 a ton and allowing the retailer a margin of \$2.25. Operators are being offered \$6@8 in Michigan and other surrounding states for the same coal, which if sold in Indiana, would bring \$3. The result is that contracts are rapidly being made outside the state.

Jobbers say there is less free coal on the Indiana market now than at any time in the history of production and retailers state their bins are entirely empty, with little prospect of getting them filled, unless the coal commission becomes more liberal in its awards.

To add to the general complexity the intrastate freight rates were increased approximately 33½ per cent with the exception of consignments to some of the industrial cities in the north central section, located in the former natural gas region. These cities' rates will be fixed later, but it is generally assumed that the rate will be lower than to other portions of the state.

MIDWEST REVIEW

Conditions Approach Normal—Car and Labor Situation Better—Indiana Coal Goes to Higher Markets—Price Decline Continues.

During the past week, the coal industry has been in a far healthier state than at any time since the beginning of the year. Market conditions have been more normal, labor has been fairly satisfactory, and the car supply, when compared with what the mines have been receiving, has been excellent.

All of the important producing fields have been receiving a car supply of 60@70 per cent. Many different grades, especially steam sizes, have dropped to more normal price levels. Domestic sizes were not much reduced.

Industries are now in fairly good shape, and do not have to pay whatever prices are demanded. The good grades are now obtaining the premium to which they are entitled. Another interesting development is the tendency of the operator to eliminate the jobber or wholesaler. The average operator feels that conditions are now pointing more toward normal, and lower prices. For this reason he is inclined to sell his coal direct and save the jobber's commission. Another reason is the fact that some recent investigations have brought out the fact that a number of wholesalers have been making abnormal profits.

The situation in the Indiana coal fields is rather interesting, although few developments took place last week. Some of the larger and more responsible Indiana operators are taking care of the Indiana trade on the basis outlined by the state commission, but a very large tonnage of Indiana coal is being shipped out of the state, sold at prices far in excess of the figures set by the commission. However, enough coal is being sold in Indiana to keep the commission temporarily satisfied.

Operators and the buying public are now feeling optimistic, as the whole coal situation is now in a fairly healthy condition. If the car supply keeps up the way it has been lately there will be plenty of coal and the market will decline still further. This will have the approval of practically all of the responsible operators, as well as the big buyers, as it is realized that a re-

turn to normal as soon as possible, will be the best thing for all concerned.

Current mine prices quoted on the open market are:

Southern Illinois (Franklin, Saline and Williamson Counties)		
Prepared sizes	.....	\$6.25@ \$7.25
Mine run	.....	5.50@ 6.25
Screenings	.....	4.50@ 5.00
Springfield District, Illinois:		
Prepared sizes	.....	\$6.25@ \$7.25
Mine run	.....	5.00@ 5.50
Screenings	.....	3.50@ 4.25
Northern Illinois:		
Prepared sizes	.....	\$6.00@ \$7.00
Mine run	.....	5.25@ 6.00
Screenings	.....	4.00@ 5.00
Indiana (current prices on coal sold outside the State of Indiana) Clinton Field, fourth vein:		
Prepared sizes	.....	\$6.75@ \$7.25
Mine run	.....	5.00@ 6.50
Screenings	.....	4.25@ 5.00
Knox County, fifth vein:		
Prepared sizes	.....	\$6.00@ \$7.00
Mine run	.....	5.00@ 5.25
Screenings	.....	4.00@ 4.50

COLUMBUS

All Coals Decline—Less Activity in Railroad Fuels—Domestic Trade Is Still Strong—Better Operating Conditions Are Noticed.

Steam coal has declined sharply. Domestic is also lower by about \$1. Slowing steam consumption, grand jury investigations and the attitude of operators have all contributed to lower prices. It is stated that prices may fall still further.

Steam trade is generally quiet. Industries have comfortable reserves and are not heavily in the present market. Utilities are now well supplied. Railroads are still buying, but requirements are not as large as formerly. Prices are now down to a point where resumption of buying for reserve purposes may be expected, but this has not developed to any marked degree as yet.

Domestic trade is still active and dealers are buying whenever possible. Pocahontas is still scarce and little of that grade is expected to be handled in the Columbus market soon. A considerable tonnage of West Virginia splint is arriving. Kentucky grades are on the market, but the main bulk of the coal comes from the southern Ohio field. Retail prices are also declining. Hocking and Pomeroy Bend lump retails \$8.50@ \$10, while mine run is 50@75c. lower. West Virginia splints are \$9.50@ \$11 and Pocahontas \$12.50@ \$15.

Under the influence of an improved car supply production in practically all Ohio fields has shown an increase. The Hocking Valley produced about 65 to 70 per cent and the same figures are reported from Pomeroy Bend. Cambridge and Crooksville had a run of 65 per cent during the week.

Prices at the mines of coals used in Central Ohio are:

Hocking lump	.....	\$6.00@ \$7.50
Hocking mine run	.....	5.50@ 6.75
Hocking screenings	.....	5.50@ 6.50
Pomeroy lump	.....	6.25@ 7.50
Pomeroy mine run	.....	6.00@ 7.25
Pomeroy screenings	.....	5.75@ 7.00
West Virginia splints, lump	.....	6.50@ 7.75
West Virginia splints, mine run	.....	6.00@ 7.50
West Virginia splints, screenings	.....	5.75@ 7.25
Pocahontas lump	.....	7.75@ 9.00

ST. LOUIS

Warm Weather Has Eased Conditions—Steam Sizes Are Heavy and Prices Lower—Domestic Is in Good Demand—Car Supply Is Short.

As a result of the investigation in Chicago, steam sizes are heavy in St. Louis and standard screenings are down to \$3, with slightly higher prices prevailing on country and Northern shipments.

A general business depression in the North and Northeast is partly responsible for the surplus of steam. The domestic market, however, is good but there is not enough coal to meet the demand. It is easy to understand what the condition would be if the weather were seasonable.

In the Standard field there are petty strikes that seriously cut down the production. At meetings held this week the miners have voted not to work on Saturdays. In the Mt. Olive field two of the largest mines were idle on account of labor troubles.

The car supply in the Standard field is far from satisfactory. The railroad tonnage cuts in heavily and is chiefly mine run. Heavy Government orders have been placed recently.

Standard prices for St. Louis shipments on domestic sizes are \$4.25@ \$5, screenings \$3@ \$4.25. Mt. Olive prices are \$4 in St. Louis for all sizes, up to \$5.50 in the country and outside.

In the Carterville district conditions are good. The car supply is somewhat short on the Iron Mountain and Illinois Central, but otherwise everything is satisfactory. Operators are asking \$4.25@ \$5.50, while some of the independents are getting as high as \$8.

No anthracite shipments are coming in. A little smokeless moving through with nothing from Arkansas. There is no change in retail prices.

Calls for domestic coal in the country are now being handled through a committee representing railroads and operators in an effort to relieve the condition in Missouri and to enable the state to get along without calling for Federal aid in the distribution of coal.

CHICAGO

Bituminous Receipts Are Better—Temperate Weather Aids the Supply—Prices Seek Lower Levels.

A special effort is being made to ship a large tonnage to Chicago, and the results have been very gratifying. Both the steam and domestic trade are now in such a position that they can choose rather than be forced to buy whatever is offered. The continued warm weather has also been effective in keeping prices lower.

A careful investigation of the coal supply, in the city of Chicago, has disclosed that there is approximately 30 days' supply on hand, which is considered fairly satisfactory. The manufacturers and other large buyers of steam coal are in better shape as they have been given an opportunity to accumulate fuel on account of the warm weather.

Eastern coals continue to be very scarce and only a few retail dealers have anything from West Virginia, Pennsylvania or Kentucky to offer. There is no denying the fact that there is a very serious shortage of hard coal. So far as Eastern soft coal is concerned, while some has been coming in during the past week, there is but little demand for it on account of the fact that southern Illinois coals are now available in fairly satisfactory quantities. West Virginia and Kentucky coals, prepared sizes, are selling anywhere from \$6@ \$10, f.o.b. mines.

DETROIT

Steam Demand Has Eased Off—Domestic Calls Are Heavy and Receipts Light—Anthracite Situation Is Unchanged.

Bituminous—Owing to manufacturing curtailment there is a material easing off in the inquiry for steam coal. The situation is also relieved somewhat by a freer movement of this coal.

The available supply of domestic is considerably less than requirements of the market. Jobbers report that domestic coal of the better grades is very scarce, as only small shipments are being received from mines in Ohio and West Virginia, which are regarded as the chief source of supply.

A larger proportion of the present supply is reported coming from mines in Indiana and Illinois, which are less highly regarded, the tonnage being restricted by the demand of markets nearer the points of production.

West Virginia mine run is reported at \$8.50 and lump \$8.75@ \$9 f.o.b. mines. Hocking mine run holds around \$8 and lump is \$8.50. Only a small amount of smokeless is being received and the quotation on lump ranges around \$10.50 at the mines.

Anthracite—Household consumers who have been unsuccessful so far in obtaining a winter supply of anthracite find little comfort in the future outlook. Retailers are practically without anthracite and report they are unable to get any definite information concerning the probability of a better supply later. Dealers are unable to make much progress in supplying customers, many of whom placed orders months ago. Substitution of bituminous coal and coke is being urged, but either supply is inadequate.

South

BIRMINGHAM

Steam Market Is Easier with More Coal Available—Domestic Shipments Temporarily Confined to State—Car Supply Is Good—Men Are Returning Rapidly.

Inquiry for steam has fallen off perceptibly in the past week. The supply of free coal has shown an increase, consumers being able to obtain a considerable tonnage of Big Seam, Mt. Carmel, Jagger and other medium grades of

Walker County. There is little Cahaba, Black Creek or Pratt to be had. Prices range from \$5.50 for Big Seam mine run, to \$6 for Jagger and Mt. Carmel. Black Creek and Cahaba bring \$7.50@ \$8.

The domestic demand is exceptionally strong, and supply from the mines is far below requirements. State Fuel Administrator Davis has issued an order prohibiting any domestic coal being shipped out of the state for an 18-day period, beginning Oct. 20, this action being taken to enable Alabama consumers to stock up some coal for winter requirements. The railroads have agreed to seize no more lump coal, and this action will greatly remedy the acute situation.

The coal-carrying lines are furnishing all the cars needed at the mines of the district, with the exception of the Louisville & Nashville, which has run a little short in the past few days on account of several hundred cars being taken to the Kentucky fields.

Production for the week ended Oct. 16 is expected to approximate 266,000 tons, which will show an increase over the preceding week of 11,000 tons. Men are reported returning to the mines in large numbers, especially in the Walker County field. However, it is expected that union officials will call all the men out at the so-called "Blue-Book Contract" mines, as it is not considered likely that the operators who signed these contracts for a two-year period from May 1 will consent to enter into negotiations for new contracts or concede to further demands which the union seeks to incorporate in the new contracts.

LOUISVILLE

Industrial Demand Is Falling Off—Prices Slightly Softer—Domestic Market Is Good—Lake Movement Is Heavy—Spot Coal Continues Scarce.

Demand is nothing like it has been, due to industries slowing down. Export promises activity as a result of the situation in England.

Car supply continues about 35 per cent, but tonnage for the field is well up, as there are far more mines, and greater production than formerly. The country situation is improved, and it is believed that there will be no December shortage.

A good many operators are abiding by the \$6 maximum agreement, but others are getting \$6.50@ \$8.50 for mine-run, and more for block, which is reported to be selling \$9@ \$10.

One retailer states that out of 40 letters sent to producers in Harlan, Hazard, Elkhorn and Straight Creek districts, eight replies were made. Most of the replies reported "sold up," or not enough coal to cover contracts.

Retail prices show eastern Kentucky or West Virginia block, \$11.50; mine-run, \$11; nut and slack, \$9.50. West Kentucky lump, \$10.50; mine-run, \$10; screenings, \$8.50.

Jeffersonville dealers have been offered an opportunity to place their requirements before the State Food and

Fuel commission, but have held off in hopes of securing eastern Kentucky or West Virginia fuels, which are principally used in the market.

Western

DENVER

October Output Is Good—Retail Prices Are Unchanged, but Steam Advances—Wage Increase Hearing Set for Nov. 4.

October output in Colorado bituminous and lignite fields is keeping up to the September figures, but sales are slow in the big cities. Retailers here experienced the biggest business so far this year during September, catching up with back orders.

Little change is expected in bituminous retail grades in November over present prices, but advances in steam coal are already under way. The Victor-American Fuel Co. has increased Routt County Pinnacle bituminous, slack, from \$3.50 to \$3.90 at the mine, causing an increase to \$7.50 a ton on the Denver market. Other grades of steam are \$3@ \$3.50 at the mine, selling for \$7 here. Trinidad steam retails for \$8.05 to apartment houses and hotels.

No change is reported in lignite slack steam, which is retailing \$5.30, although a raise of 10c. and 15c. was made recently at some mines. Cold weather may bring a further increase that will probably be reflected in Denver markets.

First grade lignite lump is selling for \$10.15, Leyden lump for \$9.35 and Weld County at \$9.15. Routt County bituminous lump is bringing \$12.50 a ton, while Rockvale is \$11.50.

Canada

TORONTO

Mild Weather Causes Decreased Demand—Dealers Still Behind in Deliveries—Continued Scarcity of Anthracite.

The weather for some time has been unusually mild and has caused a considerable slackening in the demand for domestic coal. Dealers, however, are still much behind in filling accumulated orders.

Anthracite is coming forward in fair quantities, but the yards are still almost empty, and deliveries are being made from the cars. The situation as regards bituminous, shows no change, the supply for industrial plants being still very short. The Provincial Fuel Controller, acting in conjunction with the Board of Railway Commissioners, has arranged for supplying emergency shipments for public utilities.

Quotations are as follows:

Retail	
Pea	\$15.40
Anthracite, egg, stove, nut and grate	16.90
Bituminous steam	16.00 @ \$17.40
Domestic lump	18.15
Cannel	20.00
Wholesale, f.o.b. cars at destination	
Three-quarter lump	14.50 @ \$15.00

News From the Coal Fields

Northern Appalachian

CONNELLSVILLE

Coke Market Slumps Sharply—Furnaces Are Curtailing Reserves With Some Expecting To Bank or Blow Out—Production Is Well Maintained.

The spot coke market has had a sharp break, being down \$2 on furnace grade. Not only have sales been made at \$15, but some offerings at this figure have been refused. To find a price as low as \$15 one must go back prior to July 1.

To a small extent the decline in the market is attributable to heavier production, car supplies having permitted an increased output, and supplies in the past week have been but little under actual requirements. In larger measure, however, the decline has been caused by a change of attitude on the part of many of the blast furnaces. Some that were buying spot coke have ceased to do so. Others have instructed operators to curtail shipments on requirement contracts. In each case the lessened demand is due to an intention on the part of the furnacemen either to bank or blow out.

While the coke market may decline somewhat more in the next week, no radical change is to be expected until coal goes much lower, since at \$15 coke is bringing not much more than the market value of the coal involved plus cost of conversion.

We quote the spot market at \$15 for furnace and at \$16@17 for foundry, per net ton at ovens.

The *Courier* reports production in the Conneltsville and Lower Conneltsville region in the week ended Oct. 16 at 213,265 tons, an increase of 1,105 tons.

PITTSBURGH

Market Is Easier with Further Declines in Prospect—Lake Coal Demand Very Light—P. R.R. Embargo on Export Shipments Is Tighter.

The spot coal market has softened about 50c. on ordinary steam grades and \$1@2 on gas and by-product, bringing the various grades relatively close together. While production has probably increased a trifle, the change is due chiefly to lessened market demand, as buyers are more strongly of the opinion that coal prices are marked for a sharp recession. Consumption is somewhat reduced, with prospects of there being further and sharper reductions, particularly in the iron and steel industry, which clearly is facing a period of much lighter operation.

Practically all coal operators admit that lower prices are in prospect, and

definite efforts are being made to see that the decline is an orderly one.

The Pennsylvania embargo on shipments to Tidewater is tighter, very few requests for permits being granted, and this condition has thrown more coal upon the local market. On the B. & O. there is a fairly free movement for export. Demand for Lake coal is now very light, with the end of the shipping season only a few weeks distant, and Lake prices are easier.

The market is \$8 for steam coal and \$8.50@9 for best grades of gas and by-product, per net ton at mine, Pittsburgh district.

UNIONTOWN

Coal and Coke Have Slumped Sharply—Car Supply Is Greatly Improved—Labor Is More Plentiful—Pier Shipments Are Greatly Curtailed.

All grades of coal and coke have slumped this week and from present indications the end of the drop is not yet at hand. Coke is off \$3 per ton, with coals 50c.@1.50 under last week's prices.

Furnace coke is selling at \$14.50 instead of the \$17.50 price of last Monday. Pool 44 coal is \$8; P. R.R. Pool 34 is \$7.75; B. & O. Pool 34 is \$10; P. R.R. steam is \$6.75; B. & O. steam is \$7.50, and byproduct coal is \$8.25.

Car supply has been the best since the week of Sept. 6, the Monongahela Ry. record being 85 per cent on coal and 100 per cent for coke. This has

handled the bigger production and resulted in free offerings in all domestic markets. With pier shipments practically ceased, the resultant price drop was discounted. Some talk of 1921 contracts is being heard and will increase if a further market recession is registered.

The Monongahela's excellent car supply came from a P. R.R. 50 per cent coal placement with 1,370 cars against 2,555 required and a Lake Erie 100 per cent coal placement with 4,140 cars out of 3,060 required. In coke placements the Lake Erie scored 125 per cent with 2,120 cars against requirements of 1,690 and retrieved the P. R.R.'s 70 per cent placement.

The average placement over the same period for the Pennsylvania branches was 40 per cent coal and 50 per cent coke, with similar records being made by the B. & O. Yards are once again filling up with loads, 1,600 cars being reported at Youngwood and 200 at Rainey.

Immigration from Europe is increasing and emigration from other American labor fields is reported, the latter principally from the rubber companies of Ohio. Generally speaking, the labor situation is the best of the year.

FAIRMONT

Better Car Supply Improves Production—Lakes and Tide Movement Is Heavy—Prices Generally Reduced as Agreed—Export Price Expected to Stiffen.

With car supply adequate to take care of capacity output for at least half the week, production was on a larger scale. There was a better run of cars in northern West Virginia than in the southern section. Monongahela mines had a fair run during the early part of the week, despite the fact that the

Estimates of Production

FROM THE WEEKLY REPORT OF THE GEOLOGICAL SURVEY

BITUMINOUS COAL

	1920		1919 a	
	Week	Calendar Year to Date	Week	Calendar Year to Date
Oct. 2b.....	11,350,000	404,112,000	11,518,000	352,794,000
Daily average.....	1,892,000	1,728,000	1,920,000	1,508,000
Oct. 9b.....	12,091,000	416,204,000	11,888,000	364,682,000
Daily average.....	2,015,000	1,735,000	1,981,000	1,520,000
Oct. 16c.....	12,135,000	428,339,000	11,829,000	376,511,000
Daily average.....	2,022,000	1,742,000	1,972,000	1,531,000

ANTHRACITE

Week Ended	1920	1919 a
Oct. 2.....	1,804,000	1,921,000
Oct. 9.....	1,847,000	1,955,000
Oct. 16.....	1,855,000	1,916,000

BEEHIVE COKE

United States Total

Week Ended			1920	1919
Oct. 16	Oct. 9	Oct. 18	to Date	to Date a
1920:	1920 b	1919		
403,000	400,000	383,000	16,874,000	15,485,000

(a) Less one day's production during New Year's week to equalize number of days covered for the two years. (b) Revised from last report. (c) Subject to revision. All figures in net tons.

number of assigned empties was unduly large. Cars were also fairly plentiful on the main and branch lines of the Western Maryland.

Lake and Tidewater shipments overshadowed all other movement during the week ended the 16th, but line shipments were on rather a low level, the demand having materially slackened.

During the week the Fair Practice Committee decided to ask operators to adopt the state price policy to cover coal shipped outside of the state. The maximum price for state delivery has been \$6. Surface indications are that this price is being generally followed on all line shipments. As a result, the price on Lake shipments has softened to \$6@6.50, a reduction of about one dollar per ton. Because of the British coal strike, the export market will probably stiffen. The price prevailing during the greater part of the week for export coal was \$10.50.

NORTHERN PAN HANDLE

Improved Car Supply, Government Agitation and Slackened Demand Have Lowered Prices—Lake Quotas Are Met.

There was a reasonably good car supply, though toward the latter part of the week ended Oct. 16 mines on the Baltimore & Ohio were reduced to partial idleness.

Comparatively little spot coal was available for line shipment because of Lake obligations, which mines were faithfully meeting. The demand for line shipments was not as strong as it had been, yet there was sufficient call to absorb more coal than was available.

Prices for line shipment were somewhat off color. That was partly due to the activities of the Fair Practice Committee both as to local deliveries and to points beyond the confines of West Virginia. The price for Lakes was averaging \$6@6.50 a ton.

An improved car supply and government agitation, with slackened demand among domestic consumers at markets along the Lakes are responsible for the lower prices.

EASTERN OHIO

Labor Indolence Increasing—Radical Element Threatens Loss of Production—Prices Are Softer.

Labor supply has remained about the same as when the recent outlaw strike ended, though it is reported that a great many men have left the field for other districts where they believe they will not find the radical element so much in power.

This element, since the loss of the recent strike, seems to have adopted in many places a Soviet practice, in that this type of loader goes into the mines in the morning and after loading one mine car spends the rest of the day sitting around, being careful not to leave until quitting time and thus give the operators ground for appeal to union officials on account of reduced production by the men quitting the mines when cars are available for loading. The remedy will no doubt be found in the reduction of workers'

wages, but it will take some time to convince them by this method that the practice adopted is as detrimental to themselves as they seek to make it to the operators.

Car supply during the week of Oct. 16 was much better, but this week seems to be falling off considerably, due possibly to the railroads transferring the excess empties to other fields, where shortages prevail. Prices are softening somewhat and the whole situation in this direction seems to be improving.

Production for the week ended Oct. 16 remained at approximately 250,000 tons, of which the railroads took about 35 per cent.

Middle Appalachian

NORTHEASTERN KENTUCKY

Car Supply Declines—Kentucky Consumers Get Heavy Tonnage—Set Price Prevails—Coal to Lakes in Good Volume.

Production declined further during the period ended Oct. 16, the output dropping to 110,000 tons. In other words, mines were operating on just about a halftime basis. The additional loss was caused by a 44 per cent car shortage.

A greater percentage of the coal produced in Kentucky is now being shipped to points within the state and at prices much lower than those heretofore prevailing. It is estimated that fully one-half the output of some of the fields in the eastern part of the state is being shipped at the prevailing price of \$6 a ton. This seems to be the standard price, as tacitly agreed to by the Government. It is thought that with many cars on shorter hauls it will now be possible to keep a larger number of cars in circulation.

POCAHONTAS AND TUG RIVER

More Cars Available in Tug River—Labor Conditions Improve—Lakes Program Being Pushed—Heavier Western Movement—Export Demand Is Increasing.

An increasing car shortage in the Pocahontas field has not so far greatly cut down the aggregate of production. With an increase in the car shortage loss there has been a decrease in the labor shortage. However, car shortage losses are now equal to combined losses from all sources observed about the first of October, running to 65,000 tons as against only 30,000 due to labor shortage.

There is not so stiff a demand at the Lakes despite the fact that the Government is pushing the Lakes program. Because of the downward trend of prices buyers are refusing to make purchases and that has weakened the Lake demand. There is perhaps more Pocahontas coal going to Western markets than has heretofore been the case. The demand in the East is not quite so strong though little difference is ob-

served in the volume of tonnage bound for Tidewater points.

Coal loading in the Tug River region for the week ended Oct. 16 reached a total of 88,650 net tons, representing an increase of 1,800 tons over the previous week, being close to maximum production for five days' work. More cars were available on the Norfolk & Western in this field owing to the fact that they were taken from the Thacker field in order to equalize the supply.

Tidewater continued to claim a large proportion of Tug River output with the prospect of a heightened demand in view of the British mine strike. There was not so strong a demand at the Lakes. Market fluctuations, however, affected conditions in the Tug River field only to a limited extent.

KANAWHA

Car Shortage Is More Pronounced—Lakes Movement Is Smaller—Prices Are Unchanged.

Decreased production followed a car shortage even more pronounced during the week ended Oct. 16. The car supply was under 50 per cent, taking the week as a whole. No improvement was observable in the supply of empties on the Kanawha & Michigan despite repeated promises.

While 20 per cent was fixed as the quota to be shipped to the Lakes, the per centage actually moved was larger, owing to the limited car supply. The fact that production was not so large, however tended to cut down the Lake movement as compared with the previous week.

There was just as heavy a demand from Inland markets, not only for steam but especially for domestic fuel, the Eastern market leading in that respect. Prices remained virtually unchanged. The prevailing price on spot mine run for Inland markets was about \$7.50 and for export was \$10.50@11.

VIRGINIA

Production Now Mainly Curtailed by Labor Loss—Export Demand Grows—Lower Prices for Inland Markets.

While car shortage losses have faded into insignificance a labor shortage is now responsible for virtually all the loss in the field. Production was still ranging around 130,000 tons curtailed to the extent of 20,119 tons or 13.3 per cent by the labor shortage loss.

There was no car shortage to speak of on any road except the Norfolk & Western, where it amounted to only 2 per cent. Production was best at the mines on the C. & O., where the labor shortage affected production only to the extent of 3,650 tons. The most pronounced labor loss was at mines served by the N. & W. where this reached 19 per cent.

There were signs of a growing export demand. While there was not so strong a call for coal at Inland markets, as a result of the waiting policy of buyers, yet the demand was still outstripping the supply. Prices were on a slightly lower level.

LOGAN AND THACKER

Strike Losses Continue to Decrease—Logan Car Placement Is Poor—Lakes Movement Is Heavy—Prices are Slightly Off.

Production in the Williamson field was on a larger scale, owing to progress made at mines so long affected by the strike and partly because of a slight betterment in the car supply. The ranks of working miners have been reinforced by outsiders. In other instances miners are still returning to work and will continue to do so as winter approaches.

The Norfolk & Western has again restricted mines to box cars and it is generally understood in the region that wagon mine operators are experiencing difficulty in disposing of their product because of falling prices.

Not so much coal was mined in the Guyan region in the period ended Oct. 16 as there was a slight decrease in the car supply. Production was not more than 60 per cent of capacity. For a time Lake loadings were rather slim, but on Thursday 24,000 tons, or about two-thirds of output went to Lakes.

There was a little more activity among buyers in the field both for Eastern and Western markets, a portion of the output also finding its way to Tide. Domestic coal was also in good demand but there was a perceptible decrease in the call for slack. Average run of prices for Inland was about \$7 a ton, with export at about \$10.

NEW RIVER AND THE GULF

New River Output Declines—Gulf Region Hampered With Growing Labor Shortage—Tide Shipments Are Heavy.

There was a marked decrease in the output of coal in the New River region for period ended Oct. 16. On Monday alone was the supply of empties at all adequate, the supply declining from day to day. The shortage was more pronounced than at any time in recent weeks. One trouble seemed to be the inability of the Chesapeake & Ohio to handle loads.

The export demand was strong, with a price of \$10.50 being offered in many cases, though most export coal was being moved at a figure far below that. There was no weakening in the Eastern or Western demand for New River smokeless and more coal than usual went to Western markets. However the largest part of the output went to Tide.

Supply on the Virginian Ry. was better than that on the Chesapeake & Ohio in the Gulf region, car shortage loss being only about 30 per cent while mines on the C. & O. were cut down to about half time. Virginian operators, however, were still much perturbed over the growing losses from a labor shortage, especially as such a shortage had begun to develop at a time when the car supply gave promise of marked improvement. As usual, the greater part of the Gulf output was going to Tidewater. There were plenty of bot-

toms at Tide and export dumpings during the week were larger.

Southern Appalachian**SOUTHEASTERN KENTUCKY**

Little Increase in Production—Lake Quota Is Increased—Prices Steady at Grand Jury's Figure.

There was but little if any increase in production for the week ended Oct. 16. Operators have been promised relief so often and then the cars fail to show up, that they do not expect more than two days loading time per week.

The Louisville & Nashville R.R. has notified operators that their quota of Lake coal is now about 7 per cent of the rated output of the mine. This is a material increase in the quota.

District Attorney Slattery continues to try to force the operators to agree to sell coal at a price not to exceed \$6. While this is the ruling price for coal, but few, if any of the operators have actually signed an agreement with reference to prices. To an unbiased observer, it can hardly seem fair to furnish local mines the smallest car supply of all the coal fields, and then also hammer down their selling price to a figure lower than that ruling in other districts.

Middle Western**DUQUOIN**

Market Is Unchanged—Car Supply Is Good, Production Only Hampered by Labor's Indifference.

Market conditions during the past week have not changed to any extent, although a slight downward trend has been noticed in one or two grades. The mines are still working about 70@80 per cent. One of the greatest drawbacks now is the fact that many of the men do not want to work over three or four days a week and production at the mines is greatly hampered. This is partly attributed to the fact that the recent raise in pay for the shift men gives them more money than they are used to receiving.

Contrary to many reports, the Illinois Central is holding its own in car supply. Scarcely a mine on the main line has been idle for over two weeks for the want of cars. Reports keep coming to the effect that the Illinois Central is one of the weakest in the district, however, mines along the route have not noticed it during the past few weeks.

WESTERN KENTUCKY

Demand Is Keen at Steady Prices—Production Held Down by Poor Car Supply—Field Prospects Are Improving.

Local demand is very good, due to the fact that the field has extended its market, and is getting business this season in several districts which were

hardly considered before. While buyers are not in the field as strongly as a while back, still the demand is far in excess of supply.

Since the strike, labor has settled down, and is working much better than for months past. The field is in excellent shape as a whole and only needs empties. Car supply during the past few days has been down to 26 per cent on the L. & N. lines.

Industrial demand is not as heavy as it was in the northern Indiana and Michigan districts, but a very fair volume of coal is moving in that direction, with a good Southern business which is picking up as the cotton ginners get busy.

Quotations last week averaged: prepared sizes \$5.70, mine run \$5.17, screenings \$4.18. However, spot lump is quoted in many instances \$7@\$8 a ton for good grades, mine run \$6@\$6.50, screenings \$5.50@\$5.75.

Western**UTAH**

Labor Conditions Are Excellent—Car Supply Is Poor—Retail Stocks Are Short.

Labor conditions in the Utah coal fields are excellent. The men are more anxious to work than in the past, and little mine idleness is being experienced from this source. Car shortage losses, however, are mounting, the supply being about on a par with other sections. This situation is expected to become even more acute in the near future.

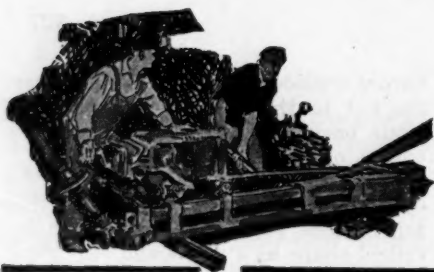
Retailers are apprehensively watching the approach of cold weather. Stocks are short, some dealers having only about 20 per cent of their usual supplies for this time of the year.

Curtailed output is greatly reducing the trade in Utah coal at the coast. With so much of the production necessarily absorbed for use inside the state, shippers are embarrassed in making deliveries elsewhere.

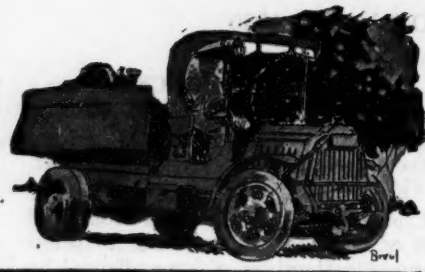
Canada**ALBERTA**

Official returns of the output of the coal mine in Alberta for July show a production of 3,560,323 tons, an increase of 1,431,354 tons over that of July 1919. The figures for August have not been made up, but an equal rate of increase is expected to be shown for that month and the remainder of the season.

About 225 mines are now at work and those remaining idle are mostly small operations, which will not materially affect the total output. Reports from the large producing mines are to the effect that efforts are being put forth to speed up production. There is some shortage of labor, but with the cessation of work in the harvest fields, more men will shortly be available in the future.



Mine and Company News



ILLINOIS

Springfield—The Peabody Coal Co. has certified to an increase in its capital stock from \$5,000,000 to \$6,000,000. Francis S. Peabody is president of the company, which has extensive holdings in the Illinois coal fields.

Duquoin—The Security Coal & Mining Co., operating a mine south of this city, is now completing a number of test holes and will within the next year sink one of the largest mines in the state. The site is located about 4 miles southwest of town and about 2 miles west of the Security mine now in operation. A switch will be constructed to the mine and a miners' train will be operated twice daily for the men to go to their work on.

KENTUCKY

Louisville—The Kanawha-Knox Coal Co. of Elys has increased its capital stock from \$50,000 to \$400,000.

E. N. Ennis, J. A. McDermott and W. H. Avant have organized the Ennis Coal Co., at Barbourville, with a capital of \$150,000.

The Elkhorn-Coleman Coal Co. has been organized at Willard, with capital of \$50,000, by P. Mullins, J. H. M. Brayer and D. B. Ramey.

The Camp Branch Coal Co., at Marrowbone, Pike County, plans a \$50,000 investment, with a mine on the B. & O. W. W. Bentley is head of the company.

OHIO

Columbus—A number of coal mining concerns were incorporated during the latter part of September, showing that rapid development work is still going on. Among these were: The Syndicate Coal Co., of Dayton, with a capital of \$60,000, by I. F. Craig and others; The Lick Creek Coal Co., of Ironton, with a capital of \$25,000, by A. E. McCoy and others; The Rice Coal Co., of Dayton, with a capital of \$25,000, by J. W. Rice and others; The Aberdeen Coal Co., of Columbus, with a capital of \$25,000, by H. H. Orr and others. The Columbus Board of Purchase has been authorized by the city council to ask for bids for approximately 10,000 tons of mine run coal for the various city departments. The advertisements will be out shortly.

Pomeroy—Reports show that there is a large amount of development work going on in the Pomeroy Bend field. Recent surveys have been made over 18,000 acres of coal lands for the purpose of locating mines and building spurs.

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Two new coal operations are now being opened in this section, both by the Essex interests of Columbus. The Stalter & Essex Mining Co., chartered several months ago, has opened a mine on the K. & M. R.R., which has an initial capacity of 400 tons. It is planned to increase this to 1,500 tons daily within a short time. The mine is modern, electrically equipped and taps 1,200 acres of good coal, with a seam five feet thick.

The other mine will be opened about Jan. 1 by the Pomeroy & Hocking Coal Co., also on the K. & M. R.R., about three miles from the other operation. This mine will develop a tract of 4,200 acres of coal, five feet thick. A switch several miles in length is now being built and also a large modern tippie. The officers of both companies are: Calvin Essex, president; Fred Essex, secretary; J. A. Stalter, treasurer, and R. T. West, vice president and general manager. The product of both mines will be sold through the Essex Coal Co.

OKLAHOMA

Gunther City—The Gunther City Coke, Coal and Mining Co. has been organized here. The company is capitalized at \$1,000,000 and will work extensive coal mines in Oklahoma and maintain coke ovens at Gunther City, with sales organizations in Oklahoma and other states for its coal and coke products. The incorporators are: E. Webb, Wichita, Kan.; W. H. Brown, Des Moines, Iowa; and C. B. Cordes, Nowata, Okla.

PENNSYLVANIA

Uniontown—Sale was recently made at auction in Pittsburgh of 7,000 shares of the capital stock of the Wetzel Coal & Coke Co. and 3,000 shares of the capital stock of the Liberty Coal Co., formerly held by Josiah V. Thompson of this city. Andrew A. Thompson of Uniontown, son of J. V. Thompson, was the purchaser at figure of \$171,000. The stock represents West Virginia coal acreage, a share of stock being issued for each acre of coal land held. Despite the fact that the sale establishes a market value of but \$17 per acre on Wetzel County coal land generally held at \$100, confirmation of the sale is expected.

Altoona—Lincoln Coal Co. at Nanty-Glo, has abandoned its electric power plant. The company has let a contract to the Penn Central Light and Power Co. for electrical current for the operation of their mine machinery. The new equipment will be installed at once.

TEXAS

San Antonio—The Calvin Coal Co. has voted to increase the capital stock from \$60,000 to \$240,000. This company conducts a wholesale and retail coal business and it is announced that the increased capital will be employed in increasing its business facilities.

WEST VIRGINIA

Charleston—The fiscal year ending June 30 will show a decrease in the production of coke by the beehive oven method. Many companies have ceased operations for several reasons. The demand for coal has been such as to discourage coke production and the manufacture of coke in beehive ovens means a heavy waste in the chemical value of the coal so burned. In abandoning the beehive method of making coke, a number of companies have in contemplation the construction of large by-product plants. One company alone which has heretofore operated nearly 500 coke ovens—the Penn-Mary Coal Co.—has decided to discontinue this and will probably in the near future build a large by-product coke plant.

Charleston capitalists are behind the newly organized Julian Coal Co. which will operate in the Boone County field of West Virginia, where, it is understood, the company will begin at an early date. The capitalization has been fixed at \$50,000. Prominent in the work of effecting a preliminary organization were: J. H. Carter, A. J. Martin, Ada M. Martin and Alpha Carter.

Logan—Operations will be conducted upon a fairly large scale by the Man Mining Co. at Man in the Logan County field. The new concern is capitalized at \$100,000. Organizers were: J. C. Miller, Charles S. Porter, William J. Harvie, C. H. Reckard and E. B. Saunders, some of whom are already interested in the Mountain State Coal Corporation also recently organized.

Clarksburg—One of the largest transactions recently consummated in northern West Virginia was that under the terms of which the Fort Pitt Coal Co. acquired the Porter tract of coal near Wilsonburg, Harrison County, some 23,388 acres, which will be developed without delay and on a large scale. When the company begins operations it will be under the necessity of producing 30,000 tons of coal in the first twelve months, being required to pay a royalty of 25c. a ton on this amount. After the first year the company will be required to mine a minimum of 43,338 tons a year until the coal in the tract is exhausted. Failure on the

part of the company to mine the tonnage stated will result in forfeiture of its rights to the tract acquired. The large acreage was purchased from George T. Porter and Hattie Goff Porter.

Meadow Bridge—Smokeless coal will be the principal product of the Thomas Smokeless Coal Co. which will operate near this place. The company has a capitalization of \$100,000. Active in organizing this company were: J. R. Chaulton, E. A. Chaulton, of Bencer, W. Va.; C. H. Thomas, of Meadow Bridge; J. E. Cray, of Richmond, Va.; B. B. Richmond, of Cranberry, W. Va.

Mt. Hope—The Glencoe Coal Co. will operate in Kanawha district of Fayette County. P. M. Snyder, one of the leading operators of the Fayette field and other coal men are interested in the new company which has a capitalization of \$200,000.

Huntington—A new million-dollar coal concern is the Beckley-Pocahontas Coal Co. The company expects to undertake the development of a large tract of coal land in Raleigh County. Huntington people are most largely interested in the new project, as follows Harry S. Irons, S. S. McNeer, E. C. Wilson, F. M. Livezey and A. J. King.

Kingwood—The operation of the newly organized Roaring Creek Collieries Co. in which Monongalia and Preston County business men are chiefly interested will be in Preston County, near Kingwood, this company having a cap-

ital stock of \$50,000. Organizers of the new company were: S. P. Mitchell, Kingwood; Everhart Bierer, Morgantown; O. W. Hawley and H. H. Morgan, Masontown; J. Mark Feather, Albright.

Morgantown—The Davis Coal Co. has recently purchased 200 acres of coal property in the Scott's Run district from the Bierer Coal Co. and is planning for the early development of the lands. This property has a daily output of about 500 tons and connects with two other properties of the Davis Coal Co., and when in operation will produce from 2,500 to 3,000 tons of coal all told.

Beckley—The Low Volatile Consolidated Coal Co., headed by C. H. Mead, of Beckley, has further increased its holdings by taking over the Ragland Coal Co., owned largely by E. M. Funckhouser of Roanoke, the purchase price being in the neighborhood of \$375,000. The company acquired had a large acreage in the Winding Gulf branch of the Virginian, operating near McAlpin, W. Va. The Low Volatile Co. has only been in existence a few months, being capitalized at \$3,000,000. By the transaction the company will be able to increase its annual output to the extent of 75,000 tons or more. The same company not long ago purchased the Bailey-Wood Coal Co., one of the leading producers on the Virginian.

Having recently sold his coal holdings at Besoco, W. Va., E. C. Minter, one of the well known operators of the Winding Gulf field, is understood to have in

mind locating at Beckley with the purpose of organizing a company there to handle the output of several companies in the Gulf region.

Bluefield—Improvements under way at the Wenonah plant of the Turkey Gap Coal & Coke Co. will give that company a large output. The company is pushing work on its new tippie for the Wenonah 3 mine, which equipped with picking tables, shaker screens, etc., will have a daily capacity of 2,000 tons. In view of the increased output for which the company is planning, it has also begun construction work on 50 additional dwellings for miners.

BRITISH COLUMBIA

Victoria—Total coal production of Vancouver Island for the month of September was 150,807 tons. This is made up as follows:

	Tons.
Canadian Western Fuel Co., Nanaimo	56,775
Canadian Collieries (D) Ltd., Comox	42,005
Canadian Collieries, South Wellington	8,461
Canadian Collieries Extension	14,545
Pacific Coast Coal Mines, Ltd., S. Wellington	7,088
Nanoose-Wellington, Nanoose Bay	5,456
Granby Consolidated Mng., S. & P. Co., Cassidy	16,477

These figures indicate that the coal fields of the Island are holding their own in point of output. The outstanding feature is the increase in production of the Granby Collieries at Cassidy, 16,477 tons for September as against 9,019 tons for the month of August.

Association Activities

Northern West Virginia Coal Operators' Association

The "Fair Practices" Committee grew out of recent resolutions adopted by the association which met with the approval of other coal operators of northern West Virginia.

This committee has divided the counties that composed the Northern Judicial District into eight sub-districts and proposes to supply all coal needs in those districts, either to individuals or domestic consumers, at a price of \$5@56 f.o.b. mine mouth. All complaints regarding coal needs and prices come to this committee through representatives in the districts or through the office of the secretary of the association at Fairmont.

It has developed that the Department of Justice expected every operator in northern West Virginia to have a copy of the resolution originally adopted on Sept. 22 signed by such operator in the office of the Attorney-General by Oct. 12.

It is felt that the action taken by northern West Virginia operators through their Fair Practice Committee and the effect of such action on the general situation is important because it will possibly point the way toward stabilizing conditions in the industry.

The roster of the Fair Practice Committee is as follows: Everett Drennen, chairman; Douglass Gorman, John L. Hatfield, C. H. Jenkins, J. C. McKinley, A. Lisle White. G. T. Bell is secretary and treasurer and Gibbs L. Baker of Washington is counsel.

Team Track Coal Operators' Association of Northern West Virginia

Greater activity among bodies of team track operators is manifested in the decision of the association to hold two meetings a month in the future. So many questions now arise in connection with the operation of team track mines which are

assuming a position of importance in northern West Virginia that a month's delay proves costly. The association recently named J. T. Michael as its executive and he is giving all his time to its affairs. The association embraces team track operators in five or six counties. Offices have been opened both at Fairmont and Clarksburg in order that members may keep in touch with association executives.

At a meeting of the association on Oct. 4 President John B. Wyatt laid stress on the fact that the association had been formed for construction purposes and that steps should be taken to put the business of wagon mine operating on such a high plane that it would command respect. Other speakers stressed the importance of daily reports. In short, the association will seek to convince railroad officials that wagon mines are deserving of just as much consideration as tippie operations.

Traffic News

Interstate Commerce Commission.—Hearing in the case of the Consolidated Coal Co. of St. Louis vs. the Director General, scheduled for Chicago, Oct. 25, has been postponed to Oct. 28 in the same city.

In the case of the Seaboard Byproduct Coke Co. vs. the Phila. and Reading Ry., the I. C. C. has decided that the rates charged on bituminous coal from Pennsylvania and other mines to Seaboard, N. J., as reconsigned from Elizabethport and Port Reading, N. J., coal piers, were unjust and unreasonable and awards the company reparation.

In complaints to the I. C. C. the Burns and Hancock Fire Brick & Clay Co. of West Montezuma, Ind., attack coal rates from Clinton, Ind., to West Montezuma, and the Ideal Fuel Co. of Chicago attacks coal rates from Herrin, Ill., to Chicago.

The commission has assigned for hearing at Pittsburgh, Nov. 29 the claim of the Avella Coal Co. of Pittsburgh for damages due to car distribution by the Pittsburgh & West Va. R.R.

An examiner of the Interstate Commerce Commission will conduct a hearing in Omaha, Oct. 28, on the reconsignment com-

plaint brought by the Omaha Chamber of Commerce.

The American Wholesale Lumber Association has attacked the \$10 demurrage charge. In that case the American Wholesale Coal Association has intervened asking that this case be consolidated with the reconsignment case. Since it is apparent that the I. C. C. is convinced that these orders are in the public interest there is little expectation that a change can be secured in that quarter. Plans are being made to carry these cases to the courts.

The West Kentucky Coal Bureau in order to enlarge the selling field has filed complaint before the I. C. C. for a rate on coal from western Kentucky mines to northern Arkansas and Missouri, seeking a basis of 25c. a ton over the rate from southern Illinois mines, as against the present combination rates, which are from \$2.50@3 higher than the rates from southern Illinois. The complaint was filed on Oct. 6.

An effort on the part of the carriers to increase by ten cents the rates applying to mines on the Norton & Northern R.R. was ended by a decision of the I. C. C., which held that the mines on this road should be kept on the same rate basis as are other West Virginia mines in that group.

The I. C. C. has canceled the hearing in the case of the Whitwell Coal Co. vs. the Railroad and Public Utilities Commission of Tennessee, which had been scheduled to take place Oct. 23 at Chattanooga.

The I. C. C. has vacated its recent order suspending proposed increased switching rate on soft coal from certain mines at Springfield, Ill., and discontinued its proceedings in the case. This permits the taking effect of an advance from 10c. to 20c. per ton switching rate on soft coal from Citizens Mines A and B at Springfield to junctions with connecting lines at that place when destined beyond. The Central Illinois Traffic Bureau had opposed the increases, but at the hearing withdrew its objections.

On Oct. 13 arguments were heard by the I. C. C. in the case of the Meyersdale Smokeless Coal Co. vs. the B. & O. R.R., and hearings held in the case of the Stone Branch Coal Co. vs. the C. & O. R.R.; also in the investigation of coal rates from West Virginia mines to Southern points.

The Minnesota Byproduct Coking Co., of St. Paul, has been refused a preference in securing coal cars.

The Minnesota Railroad Commission will investigate a complaint that retail dealers of St. Paul and Minneapolis are refusing orders of hard coal for immediate delivery.

Canadian Freights.—Further steps are being taken to do away with prepayment of freight charges on coal going to Canada. A conference between the Board of Railway Commissioners of Canada and the Interstate Commerce Commission is under consideration.

The St. Paul Gas Light Co. recently made application to the council to increase its rate from 85c. to \$1. The request was referred to an expert who has advised that the increase is justified by increased costs.

Utah Public Utilities Commission.—The action of the commission in refusing to permit increases in freight rates is to be investigated by the Interstate Commerce Commission. Should the railroad companies win it will again increase coal prices. It is claimed by the coal trade that the rates are already higher than those in effect elsewhere under similar shipping conditions.

Missouri Public Service Commission.—A committee consisting of the commission and the Attorney-General had a recent meeting in St. Louis relative to the coal shortage throughout Missouri. A committee of railroaders and coal men was appointed to work out a plan for supplying the country districts. This resulted in several operators agreeing to furnish their share of coal at reasonable prices to take care of the inland towns. W. J. McGarry, chairman of the St. Louis Committee on Car Service, will represent the railroads and E. J. Wallace, the coal operators, in this distribution.

Industrial News

Pittsburgh, Pa.—The Morrison & Risman Co., jobbers in railway track equipment, announces the removal of its local office to 209 Hous Building.

St. Louis, Mo.—The Hyatt Roller Bearing Co. has appointed L. A. Shea to represent the company in the Central States territory with headquarters at 2516 Warren Street, St. Louis, Mo. Mr. Shea will work with the mine car manufacturers and operators in the surrounding territory.

Philadelphia, Pa.—The Philadelphia & Reading Coal & Iron Co. has elected an entire new board of directors, preliminary to the separation of the coal properties from the other Reading holdings. The new members are Robert J. Carey, George H. Campbell, William D. Pollard, Jacob Ulmer, George C. Coughlin and Robert J. Montgomery. William J. Richards was re-elected president.

New York, N. Y.—The New York Fuel Distribution Committee, appointed by Public Service Commissioner Nixon, is composed of S. W. Lieb, chairman; Frank Hedley, M. S. Sloan, Walter E. Addicks, C. Andre, Jr., William Welsh, and R. H. Nexsen. The object of the organization is to supervise the coal supply of public utility companies in the city.

Philadelphia, Pa.—The Ainsworth Coal & Iron Co. announces the opening of a foreign office in Copenhagen, Denmark. Hemming Ege is the manager of the new office.

Publications Received

West Virginia Labor Injunction.—The Pocahontas Operator's Association has issued a pamphlet containing the bill, answer and injunction granted in the recent case of the operators against labor organizers, agitators and others "having designs on interfering with a non-union labor situation." Reference to the granting of this injunction was made in a recent issue of *Coal Age*. Those wishing copies should apply to W. E. Koepfer, secretary Pocahontas Operator's Association, Bluefield, W. Va.

Monthly statements of Coal Mine Fatalities in the United States, June and July, 1920. Bureau of Mines, Department of the Interior. Pp. 13; 6 x 9 in.

Obituary

Thomas Earls, 81 years old, retired coal dealer, died at his home, 124 Regent Avenue, Bond Hill, Cincinnati, Ohio. Previous to his retirement several years ago Mr. Earls had been engaged in the coal business nearly 20 years.

Richard Lamb, 61 years old, of Brooklyn, a well-known consulting and constructing engineer, with offices at 90 West Street, Manhattan, died recently after a short illness. Mr. Lamb was born in Norfolk, Va., and was a graduate of Brown University. One of his first important engineering works was the surveying of the Albemarle and Chesapeake Canal, which brought him into notice. He built the largest coal pier in the world.

Colonel J. J. McAlester, 77 years old, the discoverer of coal outcroppings in the State of Oklahoma and the man who perhaps more than all others developed coal mining in that section, died at his home in McAlester, Okla., recently. Colonel McAlester founded the city of McAlester, was first corporation commissioner of the state, served as lieutenant governor and was active all his life in the advancement of his state. Coming to Oklahoma at the close of the Civil War, he established a freighting line from Fort Smith, Ark., into what was then the Indian Territory. While operating his freight line Col. McAlester discovered outcroppings of coal in 1871. He was prominently identified with coal mining interests about McAlester up to the time of his death.

Personals

Henry B. Adams, of Lynchburg, Va., has been elected president of the Pinnacle Block Coal Co., which incorporated recently with \$1,000,000 capital. The company is organized to develop 3,000 acres of coal land. This property is located in the district around Altman, W. Va., and the management of the new company plans a daily coal output of 2,000 tons.

Harry C. Williams, for 5 years chief construction engineer of the Louisville & Nashville R.R., has resigned to become president and general manager of the Campbell Coal Co. operations with offices in Knoxville, Tenn.

D. C. Kennedy, Secretary-Commissioner of the Kanawha Operators' Association, with headquarters at Charleston, who has been in extremely poor health for several months and who has been undergoing treatment at a Baltimore hospital, is able to be at his desk once again.

G. H. Hornickel, manager of the plants of the Anchor Coal Co., operating at High-coal, W. Va., is recovering from the effects of an operation for appendicitis.

Harry Faught has been appointed as District Manager of the Boone Coal Sales Co., with headquarters at Huntington, W. Va.

J. Chilberg, for twenty years vice president of the Colorado Fuel and Iron Co., has resigned his position because of ill health. His successor, **A. H. Lichty**, of Columbus, Ohio, will confine his labors to employees' representation, but will not assume charge of the sales department, of which Mr. Chilberg was the head for many years. Other changes effective Oct. 1 were the appointment of **Fred Farrar** of the legal department as executive assistant to the president and the appointment of **E. S. Cowdick**, editor of the company's *Industrial Bulletin*, as assistant to Vice President Lichty.

George R. Arbuckle, formerly with the Union Colliery Co., of St. Louis and other concerns in Southern Illinois, is now with the Jewel Coal & Mining Co., at Du Quoin, Ill.

William Griffith Tytus, auditor of the Sunday Creek Coal Co., Columbus, Ohio, was married recently to Miss Frances Jones, daughter of J. S. Jones, head of the company, at the latter's residence near Granville, Ohio.

W. A. Chandler has resigned his position as electrical engineer for the H. C. Frick Coke Co. of Uniontown, Pa., to become associated with the Hudson Coal Co., of Scranton. **George E. Gramm** succeeds Mr. Chandler.

G. R. Delamater has resigned as assistant superintendent of the by-product coke

oven department of the Harrisburg plant of the Bethlehem Steel Co. Mr. Delamater leaves his present position to become vice-president and general manager of the Anthracite Production Corporation.

J. W. Powell, General Superintendent of the Consolidation Coal Co., Jenkins, Ky., has resigned his position and gone to the Bull Mountain Coal fields of Montana where he has been engaged to make an examination and report on the coal holdings of The Bull Mountain Coal & Realty Co., whose head office is in Eau Claire, Wis. The property is located 29 miles northeast of Billings.

Charles A. Owen has been elected president of the Tidewater Coal Exchange and **J. W. Howe** elected secretary, treasurer and commissioner.

W. C. Hippard, formerly with the Willisville Coal & Mining Co., of St. Louis, has been appointed as chief mining engineer for the Kathleen mine at Dowell, Ill., owned by the Union Colliery Co., of St. Louis. Mr. Hippard is a man of some experience in his line and he fills a vacancy left by **D. W. Detweiler**, who is now superintendent of the mine.

Jesse C. Suter, **Thomas J. Donovan**, **Allan Davis** and **D. H. York** were appointed by the Federation of Citizens Associations to consider alleged unreasonable prices being charged for coal in the District of Columbia.

Trade Catalogs

Defend Your Steam. Magnesia Association of America, Philadelphia, Pa. Pp. 80; 8 x 11 in.; illustrated. Describing phases of heat and fuel savings with magnesia pipe and boiler covering.—Advertiser.

Control of Motor-Driven Steel Mill Machinery. The Cutler Hammer Mfg. Co., Milwaukee, Wis. Publication 870; pp. 48; 8 x 11 in.; illustrated. Describing C-H products used in mining and ore handling, furnace and mill practice.—Advertiser.

Dings Magnetic Separators. Dings Magnetic Separator Co., Milwaukee, Wis. Bulletin 81; pp. 23; 3½ x 6 in.; illustrated. Describing operation, practical uses and application of principle of magnetic separation.—Advertiser.

Waugh "90" Drills. The Denver Rock Drill Mfg. Co., Denver, Col. Pp. 16; 6 x 9 in.; illustrated. Cuts and general specifications of the "90" drill.—Advertiser.

Webster Method. The Webster Mfg. Co., Chicago, Ill. October publication, containing articles and photographs of recent interesting installations in the coal mining and other fields.—Advertiser.

Nonpareil Insulating Brick. Armstrong Cork Co., Pittsburgh, Pa. Pp. 72; illustrated; 6 x 9 in. Insulation of high temperature industrial equipment.

Link-Belt Traveling Water Screen. Link-Belt Co., Chicago, Ill. Book 352; pp. 24; illustrated. Describing effective and economical screening of condensing water.—Advertiser.

Dorman Wave Power Tools. W. H. Dorman & Co., Ltd., Stafford, England. Pp. 68; 8½ x 11 in.; illustrated. The first of a series of appliances originated and designed by sole British licensees and manufacturers of wave portable, percussion and rotary tools.

Coming Meetings

Illinois Mining Inst. will hold its next meeting on Nov. 20 at Springfield, Ill. Secretary, Martin Bolt, Springfield, Ill.

Coal Mining Institute of America will hold its annual meeting Dec. 8, 9 and 10, 1920, in the Chamber of Commerce Auditorium, Pittsburgh, Pa. Secretary, H. D. Mason, Jr., Chamber of Commerce Bldg., Pittsburgh, Pa.

American Mining Congress will hold its annual meeting at Denver, Col., Nov. 15 to 19. Secretary J. F. Callbreath, Munsey Building, Washington, D. C.

The American Society of Mechanical Engineers will hold its annual meeting Dec. 7, 8, 9 and 10 in the Engineering Societies Building, 29 West 39th St., New York City. Secretary, Calvin W. Rice, 29 West 39th St., New York City.